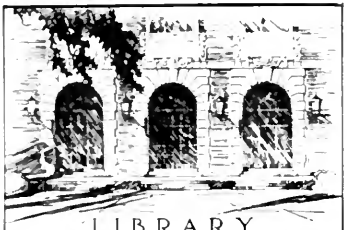

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STUDIES OF AMERICAN PLANTS—III

BY

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STUDIES OF AMERICAN PLANTS—III

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The following pages are devoted chiefly to descriptions of new species of tropical American plants, but there are listed, also, a few new combinations necessary for conformity with the International Rules.

Most of the new species described are from one of three principal sources. Many of them are Venezuelan Rubiaceae, which it was intended to publish in an enumeration of the plants of that family occurring in Venezuela, but since the publication of that account must be delayed for some months, it seems desirable to publish the new species at the present time.

Many of the plants here described are from Yucatan. Their diagnoses precede a flora of that region which, it is expected, will be issued in the near future.

Finally, the present paper contains descriptions of a large number of apparently new plants discovered in the current collections received for determination by Field Museum. Most of these novelties are Central American. A few were collected by the writer in Honduras in 1927-28, and several were found in the Salvadorean collections which Dr. Salvador Calderón, with his customary enthusiasm and diligence, has continued to forward.

The majority of the new Central American species were collected in British Honduras, a country in which unwonted botanical activity has developed during the past year. Several were detected in the northern part of that colony by Mr. C. L. Lundell, whose large collection of the past season is supplying the first adequate representation of the flora of any limited region of British Honduras. Mr. Lundell's collections have furnished the first records of the occurrence in Central America of numerous species known previously only from Yucatan or from more northern parts of Mexico.

The majority of the new British Honduras plants here described are from the astonishingly rich collection made lately by Mr. William A. Schipp. He seems to have a genius for discovering rare plants, or at least those which have escaped the attention of earlier explorers. Certain species occurring in his series are quite unexpected discoveries. Some represent substantial extensions of range, and

others illustrate species known heretofore only from the original collection. Particularly noteworthy is the discovery so far northward of the genus *Bredemeyera,* presumed previously to be confined to South America, and of a second Central American species of *Quiina,* the first having been named from Panama only recently by the present writer.

Unless indicated otherwise, all the specimens cited on the succeeding pages are in the herbarium of Field Museum.

PALMACEAE

Acoelorhaphe Wrightii (Griseb. & Wendl.) Wendl.—Originally described from Cuba, this handsome palm probably occurs also in Florida and the Bahamas. It may now be added to the flora of Central America, on the basis of a collection made in British Honduras, along the Stann Creek Railway, in March, 1929, *W. A. Schipp 93.* At first I was inclined to believe that the British Honduras plant represented a distinct species, but the differences between it and the Cuban form do not seem to be of specific importance.

Bactris hondurensis, sp. nov.—Caudices erecti gracillimi c. 1 m. alti, ut videtur inermes, c. 1 cm. diam., in sicco brunnei, glabri, internodiis c. 3 cm. longis; folia in parte superiore caudicis sparsa; petiolus gracilis 28-33 cm. longus et ultra, supra sulcatus, aculeis paucis gracillimis atro-brunneis vel nigrescentibus 2-3.5 cm. longis armatus, basi valde ampliatus et vaginans; lamina bifida, simplex vel infra medium pinnatisecta, viridis, supra glabra vel sparse pilosula, subtus dense molliterque pilosa, segmentis 2 terminalibus latissimis, latere superiore 23-27 cm. longis, 7-17 cm. latis, inferioribus brevioribus angustioribusque, omnibus longissime et anguste caudato-attenuatis, ad margines saepe aculeolatis, aculeolis adpressis; spadices 4-5 cm. longe pedunculatae, 2-4 cm. longae; fructus ruber, 1.5 cm. diam., globosus, sessilis, apice mamillatus.—Honduras: Wet forest, Lancetilla Valley near Tela, Dept. Atlántida, alt. 150 m., March 13, 1928, *Paul C. Standley 56798* (Herb. Field Mus. No. 581,781, type). Also *No. 54212* from the same locality.

This palm grows only in the deep forest well up on the hillsides above Lancetilla. It is a slender and graceful plant, much less offensively armed than most species of the genus.

MUSACEAE

Heliconia reticulata (Griggs), comb. nov. *Bihai reticulata* Griggs, Bull. Torrey Club 31: 446. 1904.

Heliconia revoluta (Griggs), comb. nov. *Bihai revoluta* Griggs, Bull. Torrey Club 42: 322. *f. 3.* 1915.

ORCHIDACEAE

Cypripedium montanum Dougl.—In recent years, in spite of the extensive collections that have been made in Alaska, very few species new to the flora of the territory have been found. To the two species of *Cypripedium* hitherto known from the region may now be added this one of altogether different appearance. The data are as follows: Alaska: Glacier Bay, July 16, 1929, *William S. Cooper & Frances E. Andrews 212.* It is remarkable that so showy a plant should not have been found by some of the numerous collectors who have visited this locality in former years.

PIPERACEAE

Peperomia achoteana Trelease, sp. nov.—A moderately small, glabrous, stoloniferous, rupicolous herb with short leafy branches; stem 2-3 mm. thick, purplish, striate-angular; leaves alternate, elliptic-subobovate, obtuse or abruptly emarginulate-apiculate, acute-based, 2x2.5, 2.5x3.5, or 3.5x5.5 cm., 3-5-nerved, coriaceous, subrevolute, paler beneath; petiole 5-10 mm. long; spikes terminal and axillary, as yet 1x15 mm. and short-stalked; bracts round-peltate.—Honduras: On stone wall, El Achote above Siguatepeque, Dept. Comayagua, alt. 1,500 m., February, 1928, *Paul C. Standley 56160* (Herb. Field Mus. No. 581,095, type).[1]

Peperomia siguatepequensis Trelease, sp. nov.—A small erect crisp-pubescent terrestrial herb; stem 2-3 mm. thick, naked below; leaves alternate, broadly ovate, acute, subacute at the base, 5x10-15x20 mm., reddish beneath, thick but drying translucent and 3-nerved by transmitted light; petiole very slender, 5 mm. long; spikes terminal, filiform, 30 mm. long, closely flowered; peduncle scarcely 5 mm. long; bracts round-peltate; berries round-ovoid, mucronate; stigma oblique.—Honduras: Moist shaded bank, Siguatepeque, Dept. Comayagua, alt. 1,100 m., February, 1928, *Paul C. Standley 56534* (Herb. Field Mus. No. 580,969, type).[2]

FAGACEAE

Quercus salvadorensis Trelease, sp. nov.—*Acutifoliae.* Twigs rather slender (2-3 mm.), little fluted, glabrous, reddish, with large pale lenticels; buds glossy brown, glabrous, ellipsoid, very obtuse,

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[1] **Peperomia achoteana** Trelease, sp. nov.—Herba parvula glabra stolonifera, ramis brevibus foliatis, caule 2-3 mm. crasso striato-angulato; folia alterna, elliptico-subobovata, obtusa vel abrupte emarginulato-apiculata, basi acuta, 3-5-nervia, coriacea, subrevoluta, subtus pallidiora, petiolata; spicae terminales et axillares breviter pedunculatae, bracteis orbiculari-peltatis.

[2] **Peperomia siguatepequensis** Trelease, sp. nov.—Herba parva erecta terrestris crispo-pubescens; folia alterna late ovata acuta, basi subacuta trinervia, petiolo gracillimo; spicae terminales filiformes densiflorae, bracteis orbiculari-peltatis; baccae rotundato-ovoideae mucronatae, stigmate obliquo.

about 2x4 mm.; leaves persisting until after flowering time, hard-papery, lanceolate, acute at both ends, serrate above the middle with long-aristate deltoid teeth between which the margin is straight, moderate (about 5x14 cm.), glossy, glabrous, dark green above, the veins about 10x2, not looped; petiole glabrous, 1x25-40 mm.; catkins not seen; fruit apparently biennial, the cup conical-saucer-shaped, nearly 25 mm. in diameter, with rather thin, closely appressed, glabrate, more or less pointed scales; acorn round-ovoid, blunt, about 20 mm. long, dark brown and glossy, covered at the base only.—Salvador: Summit of Cerro del Guayabal, alt. 1,440 m., January 3-4, 1924, *Salvador Calderón 1981* (U. S. Nat. Herb., type).[1]

"Roble blanco."

Quercus guayabalana Trelease, sp. nov.—*Linguaefoliae.* Twigs moderately stout (3-4 mm.), little fluted, rather persistently and densely brown-tomentose, purplish gray when denuded and with paler lenticels; buds ovoid, brown-hairy but becoming glabrate and glossy brown, 2x4 mm.; leaves evergreen, elliptic- or lance-oblong, acute, cordulate, entire, slightly revolute, moderately large (4-5.5x12-17 cm.), coriaceous, tomentose becoming glabrate and glossy except in sheltered places, the veins about 13x2 with some short intermediates, looping and somewhat forked; petiole grayish-tomentose, thick, scarcely 5 mm. long; staminate catkins 10 cm. long, floccose, rather loosely flowered, the glabrous ellipsoid anthers somewhat exserted; fruit biennial, paired at the end of a peduncle scarcely 1 cm. long at the end of the first year; scales of the young cup rounded, gray-tomentulose except at the margin.—Salvador: Summit of Cerro del Guayabal, alt. 1,440 m., January 3-4, 1924, *Salvador Calderón 1982* (U. S. Nat. Herb., type).[2]

"Roble negro."

MORACEAE

Coussapoa Purpusii, sp. nov.—Arbor semi-epiphytica, ramulis crassis ferrugineo-brunneis glabris, lenticellis paucis magnis pallidis conspersis; stipulae lanceolato-oblongae 12-18 mm. longae longi-acuminatae, dorso et praesertim versus apicem minute sericeae, brunneae, caducae; folia petiolata, petiolo 1.5-3 cm. longo gracili glabro supra breviter sulcato; lamina coriacea, oblonga, elliptico-oblonga vel ovato-oblonga, 9-14 cm. longa, 4-6 cm. lata, acuta vel

[1] **Quercus salvadorensis** Trelease, sp. nov.—Ramuli subgraciles glabri pallide lenticellati; folia subpersistentia, crasse papyracea, lanceolata, utrinque acuta, supra medium serrata, serraturis deltoideis longiaristatis, lucida, glabra, petiolata; nux ut videtur biennis; cupula conico-patelliformis, squamis arcte adpressis subtenuibus glabratis plus minusve acutatis, nuce rotundato-ovoidea, fusco-brunnea, lucida.

[2] **Quercus guayabalana** Trelease, sp. nov.—Ramuli validiusculi, subpersistenter brunneo-tomentosi, serius purpureo-grisei, pallide lenticellati; folia sempervirentia, elliptico- vel lanceolato-oblonga, acuta, cordulata, integra, subrevoluta, coriacea, tomentosa, serius glabrata, petiolo griseo-tomentoso crasso; spicae masculae floccosae laxiflorae, antheris subexsertis; nuces biennes ad apicem pedunculi brevis geminatae, cupulae juvenilis squamis rotundatis, margine excepto griseo-tomentulosis.

acuminata, basi rotundata, glabra, supra viridis, nervis vix elevatis, subtus pallida, costa gracili elevata, basi trinervia; inflorescentiae numerosae axillares cymosae, 2-3 cm. longe pedunculatae, dichotomae, ramulis gracilibus glabris; capitula globosa vel depresso-globosa 4-8 mm. lata, densissime multiflora, pedunculis 3-10 mm. longis apicem versus paullo dilatatis.—Mexico: Zacuapam, Veracruz, April, 1928, *C. A. Purpus 11162* (Herb. Field Mus. No. 588,337, type); March, 1908, *Purpus 5996*.

This is the first true *Coussapoa* to be reported from Mexico. A tree described by the writer under the name of *C. Rekoi* is stated by Mildbraed (Notizbl. Bot. Gart. Berlin 10: 413. 1928) to be synonymous with *Poulsenia aculeata* Eggers, of Ecuador.

Ficus Schippii, sp. nov.—Arbor epiphyticus 15-metralis, trunco 10-12.5 cm. diam., ramulis crassiusculis teretibus brunnescentibus et plus minusve griseis glabris, internodiis brevibus; stipulae 15-18 mm. longae, anguste lanceolatae, longe attenuatae, crassae, brunnescentes, glabrae, caducae; folia longiuscule petiolata, petiolo gracili 1.5-5.5 cm. longo glabro; lamina subcoriacea, oblonga vel ovali-oblonga, 8-14.5 cm. longa, 4.5-5.8 cm. lata, apice obtusa vel interdum rotundata et abrupte cuspidato-acuminata, acumine angusto c. 1 cm. longo obtuso, basi obtusa vel rotundata, integra, utrinque glabra, costa nervisque supra prominulis, costa subtus elevata, gracili, nervis lateralibus utroque latere c. 13, angulo lato divergentibus, fere rectis, prominentibus, prope marginem conjunctis; receptacula geminata sessilia subglobosa vix 5 mm. diam. glabra, ostiolo plano, involucro adpresso glabro, lobis 2 subaequalibus c. 1 mm. longis apice rotundatis.—British Honduras: Middlesex, alt. 60 m., September 1, 1929, *W. A. Schipp 334* (Herb. Field Mus. No. 602,917, type).

Since the writer published, in 1917, an account of the Mexican and Central American species of *Ficus* (Contr. U. S. Nat. Herb. 20: 1-35), very few new species of the genus have been detected in Central America. This is remarkable, in view of the fact that during the past twelve years a great deal of collecting has been done in the region. Apparently, most of the species of Central America have been collected.

The present plant does not agree, however, with any of the species hitherto recorded for Central America. Probably it is related to *F. Colubrinae* Standl., but that differs in having smaller leaves, more or less pubescent, and with only 2-4 pairs of lateral nerves.

LORANTHACEAE

Struthanthus cassythoides Millsp., sp. nov.—Frutex epiphyticus omnino glaber, ramis longis ut videtur pendentibus, saepe volubilibus, griseis, teretibus, internodiis brevibus vel elongatis;

folia subsessilia (petioli vix 2 mm. longi), obovata vel oblongo-obovata, 2.5-3.5 cm. longa, 0.8-1.5 cm. lata, apice late rotundata, basi cuneata, crassa, basi 4-5-nervia, subtus minute granulosa; cymae solitariae vel ad nodos fasciculatae, valide 2-5 mm. longe pedunculatae, 3-10-florae, floribus solitariis vel congestis sessilibus; calyx ovario adjecto 1 mm. longus, limbo truncato; petala 4 linearia 3 mm. longa; filamenta valida petalis aequilonga; stylus crassus glaber petalis aequilongus.—Yucatan: Progreso, *G. F. Gaumer 1174* (Herb. Field Mus. No. 438,251, type), *2220, 2458*. Without definite locality, *Gaumer 23997*.

This was indicated as a new species of *Loranthus* by Dr. Millspaugh, but no description of it has ever been published. The Yucatan plant is perhaps related to *S. diversifolius* (Benth.) Standl., a little-known species of central Mexico.

ARISTOLOCHIACEAE

Aristolochia Schippii, sp. nov.—Frutex alte scandens c. 10 m. longus, ramulis subteretibus, vetustioribus cortice crassa suberosa profunde sulcata et corrugata obtectis, c. 1.5 cm. crassis, novellis glabris; folia longipetiolata, petiolo 10-15 cm. longo gracili glabro; lamina subcoriacea, late deltoideo-ovata, c. 24 cm. longa et 18 cm. lata, acuta vel breviter acuminata, basi profunde cordata, sinu subquadrangulari c. 5 cm. longo et 3.5 cm. lato, lobis basalibus late rotundatis, glabra, 5-nervia, nervis utrinque prominentibus, nervulis subtus prominulis et arcte reticulatis; flores ut videtur e ramis defoliatis nascentes, fasciculati, pedicellis gracillimis 2-2.5 cm. longis; calyx glaber, flavescens, venis rubro-brunneis reticulatis, 5 cm. longus, paullo curvatus, parte basali inflata 1 cm. longa et 7 mm. lata, tubo 1.5 cm. longo, labio fere 3.5 cm. longo longe acuminato basi explanato 14 mm. lato; capsula 11 cm. longa, 1 cm. crassa, basi abrupte contracta et stipitata, apice quoque contracta et acuminata, 6-costata, glabra.—British Honduras: In jungle, Big Creek, alt. 15 m., March 11, 1929, *W. A. Schipp 75* (Herb. Field Mus. No. 588,326, type).

POLYGONACEAE

Coccoloba cardiophylla, sp. nov.—Omnino glabra, ramulis teretibus obscure striatis griseis, internodiis brevibus vel elongatis; ocreae caducae 8-12 mm. longae crassae brunneae; petioli graciles 1-2 cm. longi; lamina ovato-rotundata vel rotundato-ovata, 5-7 cm. longa, 3.5-5.5 cm. lata, apice obtusa vel acutiuscula, basi rotundata et emarginata vel profunde cordata, sinu usque ad 6 mm. longo, lobis basalibus rotundatis, subcoriacea, opaca, concolor, basi 5-nervia, costa utrinque nervos 3–4 graciles subtus prominentes emittente, nervulis gracillimis arctissime reticulatis sed inconspicuis; racemi floriferi 1-2 cm. longi, sessiles vel subsessiles, fructiferi c. 3 cm. longi, laxi et remotiflori, pedicellis validis divaricatis 2-3 mm. longis ocreolis minutis multo longioribus; sepala 1 mm. longa ovalia;

stamina sepalis aequilonga.—Yucatan: Without definite locality, in 1917-21, *G. F. Gaumer 24013* (Herb. Field Mus. No. 552,016, type). Kancabtsonot, *Gaumer 23865, 23905.*

Coccoloba cardiophylla is well differentiated from other Mexican species by the small broad leaves with cordate base, and by the long pedicels.

Coccoloba changuinolana, sp. nov.—Arbor usque ad 9 m. alta, trunco 10-13 cm. diam., ramulis gracilibus teretibus rimosis glabris, internodiis brevibus; ocreae deciduae; folia breviter petiolata, petiolo 1-2.2 cm. longo subtereti supra anguste sulcato glabro; lamina crasse membranacea, ovalis vel ovali-elliptica, 12-21 cm. longa, 5.5-10.5 cm. lata, apice acuta vel plerumque rotundata et abrupte breviterque acuminata, acumine vix 1 cm. longo triangulari, basi obtusa vel subrotundata et saepius plus minusve obliqua, glabra, costa nervisque supra prominulis, subtus elevatis, costa gracili, nervis lateralibus utroque latere c. 11, gracilibus, angulo lato adscendentibus, subarcuatis, juxta marginem conjunctis, nervulis prominulis reticulatis; racemi terminales foliis saepe longiores, solitarii, simplices, brevissime pedunculati, 4-19 cm. longi, dense vel remote multiflori, rhachi minute puberula, ocreolis 1.5-2 mm. longis; pedicelli in anthesi ocreolis subaequales, glabri, perianthio glabro 1.5-2 mm. longo; stamina exserta; fructus late ovoideus 7 mm. longus obtusus, perianthii tubo accrescente inclusus.—Panama: Farm Six, Changuinola Valley, March 3, 1924, *V. C. Dunlap 499* (Herb. Field Mus. No. 580,004, type). Daytonia Farm, region of Almirante, in 1928, *Cooper 421.*—Costa Rica: La Palma, Changuinola Valley, *Dunlap 467.*

Related to *C. Schiedeana* Lindau, of Mexico and northern Central America, in which the leaves are coriaceous.

AMARANTHACEAE

Alternanthera martinicensis (Moq.), comb. nov. *Telanthera martinicensis* Moq. in DC. Prodr. 13²: 366. 1849.

Alternanthera obovata (Mart. & Gal.), comb. nov. *Bucholzia obovata* Mart. & Gal. Bull. Acad. Brux. 10¹: 348. 1843. *Telanthera obovata* Moq. in DC. Prodr. 13²: 370. 1849.

Alternanthera megaphylla (Standl.), comb. nov. *Achyranthes megaphylla* Standl. N. Amer. Fl. 21: 141. 1917.

Alternanthera panamensis (Standl.), comb. nov. *Achyranthes panamensis* Standl. Contr. U. S. Nat. Herb. 18: 89. 1916.

Alternanthera stenophylla (Standl.), comb. nov. *Achyranthes stenophylla* Standl. Contr. U. S. Nat. Herb. 18: 90. 1916.

Alternanthera pycnantha (Benth.), comb. nov. *Brandesia pycnantha* Benth. Bot. Voy. Sulph. 157. 1884. *Telanthera pycnantha* Moq. in DC. Prodr. 13²: 376. 1849.

folia subsessilia (petioli vix 2 mm. longi), obovata vel oblongo-obovata, 2.5-3.5 cm. longa, 0.8-1.5 cm. lata, apice late rotundata, basi cuneata, crassa, basi 4-5-nervia, subtus minute granulosa; cymae solitariae vel ad nodos fasciculatae, valide 2-5 mm. longe pedunculatae, 3-10-florae, floribus solitariis vel congestis sessilibus; calyx ovario adjecto 1 mm. longus, limbo truncato; petala 4 linearia 3 mm. longa; filamenta valida petalis aequilonga; stylus crassus glaber petalis aequilongus.—Yucatan: Progreso, *G. F. Gaumer 1174* (Herb. Field Mus. No. 438,251, type), *2220, 2458*. Without definite locality, *Gaumer 23997*.

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AMARANTHACEAE

Alternanthera martinicensis (Moq.), comb. nov. *Telanthera martinicensis* Moq. in DC. Prodr. 13²: 366. 1849.

Alternanthera obovata (Mart. & Gal.), comb. nov. *Bucholzia obovata* Mart. & Gal. Bull. Acad. Brux. 10¹: 348. 1843. *Telanthera obovata* Moq. in DC. Prodr. 13²: 370. 1849.

Alternanthera megaphylla (Standl.), comb. nov. *Achyranthes megaphylla* Standl. N. Amer. Fl. 21: 141. 1917.

Alternanthera panamensis (Standl.), comb. nov. *Achyranthes panamensis* Standl. Contr. U. S. Nat. Herb. 18: 89. 1916.

Alternanthera stenophylla (Standl.), comb. nov. *Achyranthes stenophylla* Standl. Contr. U. S. Nat. Herb. 18: 90. 1916.

Alternanthera pycnantha (Benth.), comb. nov. *Brandesia pycnantha* Benth. Bot. Voy. Sulph. 157. 1884. *Telanthera pycnantha* Moq. in DC. Prodr. 13²: 376. 1849.

Alternanthera cordobensis (Standl.), comb. nov. *Achyranthes cordobensis* Standl. Contr. U. S. Nat. Herb. 18: 90. 1916.

Aerva scandens (Roxb.) Wall., f. **sanguinea,** f. nov.—Folia sanguinea vel purpurea; ceteris formae typicae omnino similis.—Cuba: Jardín Botánico, Havana, cultivated, March 4, 1929, *L. H. Bailey 12116* (Herb. Field Mus. No. 600,264, type).

Dr. Bailey reports that this red-leaved form is grown in Havana as a border plant, in the same manner as some of the well-known fancy-leaved forms of the genus *Alternanthera.*

CHENOPODIACEAE

Suaeda Palmeri (Standl.), comb. nov. *Dondia Palmeri* Standl. N. Amer. Fl. 21: 91. 1916.

Suaeda tampicensis (Standl.), comb. nov. *Dondia tampicensis* Standl. N. Amer. Fl. 21: 91. 1916.

Suaeda taxifolia (Standl.), comb. nov. *Dondia taxifolia* Standl. N. Amer. Fl. 21: 91. 1916.

Suaeda brachyphylla, nom. nov. *Dondia brevifolia* Standl. N. Amer. Fl. 21: 92. 1916, not *S. brevifolia* Phil., 1895.

Atriplex nitens Schkuhr.—This introduced species is not listed from Utah, but the following collection may be reported: Damp saline soil, Beck's Hot Springs, Salt Lake County, September 12, 1924, *S. Flowers No. 643.* The specimen was communicated by Professor A. O. Garrett.

NYCTAGINACEAE

Allionia cristata (Standl.), comb. nov. *Wedelia cristata* Standl. Contr. U. S. Nat. Herb. 12: 331. 1909.

Allionia glabra (Choisy), comb. nov. *Allionia incarnata* var. *glabra* Choisy in DC. Prodr. 13[2]: 435. 1849. *Wedeliella glabra* Cockerell, Torreya 9: 167. 1909.

Allionia glabra Kuntze (Rev. Gen. 2: 533. 1891) is a member of the genus *Oxybaphus,* therefore the specific name *glabra* is valid for a species of the genus *Allionia,* as that generic name is employed here.

Oxybaphus corymbosus (Cav.), comb. nov. *Mirabilis corymbosa* Cav. Icon. 4: 55. 1797. *Allionia corymbosa* Kuntze, Rev. Gen. 2: 533. 1891.

Oxybaphus microchlamydeus (Standl.), comb. nov. *Allionia microchlamydea* Standl. Contr. U. S. Nat. Herb. 13: 405. 1911.

Oxybaphus gausapoides (Standl.), comb. nov. *Allionia gausapoides* Standl. Contr. U. S. Nat. Herb. 13: 406. 1911.

Oxybaphus decipiens (Standl.), comb. nov. *Allionia decipiens* Standl. N. Amer. Fl. 21: 233. 1918.

Oxybaphus lanceolatus (Rydb.), comb. nov. *Allionia lanceolata* Rydb. Bull. Torrey Club 29: 691. 1902.

Oxybaphus pumilus (Standl.), comb. nov. *Allionia pumila* Standl. Contr. U. S. Nat. Herb. 12: 345. 1909.

Oxybaphus rotundifolius (Greene), comb. nov. *Allionia rotundifolia* Greene, Pl. Baker. 3: 33. 1901.

Oxybaphus Grayanus (Standl.), comb. nov. *Allionia Grayana* Standl. N. Amer. Fl. 21: 227. 1918.

Oxybaphus longipes (Standl.), comb. nov. *Allionia longipes* Standl. N. Amer. Fl. 21: 229. 1918.

CARYOPHYLLACEAE

Drymaria excisa, sp. nov.—Herba gracilis, caulibus usque ad 50 cm. longis, internodiis elongatis, inferioribus glabris, superioribus viscido-puberulis; folia longe petiolata, petiolo plerumque 1-2 cm. longo fere filiformi glabro, foliis superioribus interdum fere sessilibus; lamina membranacea, latissime rotundato-obdeltoidea vel interdum fere rotundata, 1-2.8 cm. longa, 1-3.4 cm. lata, apice truncata vel brevissime retusa et apiculata, rarius rotundata, basin versus paullo angustata et late cuneata, trinervia, glabra, nervis late arcuatis, apice laminae conjunctis; stipulae lineares vel subulatae 1.5-2.5 mm. longae erectae; flores pauci subumbellati, pedicellis gracilibus elongatis puberulis; sepala lanceolato-oblonga 5-6 mm. longa viridescentia acuta minute puberula; petala alba sepalis paullo longiora.—Mexico: Real Alto, trail to El Tajo de Santiago, Sierra Madre Occidental, Jalisco, on densely wooded, damp, north slope, alt. 750 m., February 23, 1927, *Ynes Mexia 1748* (Herb. Field Mus. No. 579,891, type).

The species may be recognized easily by the form of its leaves, which are very different from those of any other species.

MENISPERMACEAE

Hyperbaena nectandrifolia, sp. nov.—Ramuli brunneo-olivacei teretes striati glabri internodiis brevibus; petioli 1.3-4 cm. longi crassiusculi, superne paullo incrassati, subteretes, glabri; lamina crasse coriacea, integra, oblonga vel anguste oblonga, 11-24 cm. longa, 4-8.5 cm. lata, acuta vel acuminata, basi acuta vel acutiuscula et saepe inaequalis, supra viridis, lucida, costa ut nervi et nervuli prominente, nervulis arcte reticulatis, subtus vix pallidior, sublucida, costa crassiuscula elevata, nervis lateralibus utroque

latere 6-8, angulo acuto adscendentibus, valde inaequalibus, elevatis, subarcuatis, remote a margine irregulariter conjunctis, nervulis vix prominulis, lamina e basi saepe trinervia; paniculae laxae petiolis paullo longiores, fasciculatae, ramulis gracilibus minute ferrugineo-pilosulis, floribus breviter pedicellatis; bracteis minutis pilosulis; flores in alabastro vix 1 mm. lati, sepalis subrotundatis extus minute pilosulis.—Yucatan: Izamal, in 1888, *G. F. Gaumer* (Herb. Field Mus. No. 181,606, type).

The plant is rather similar to *H. phanerophlebia* Standl., but in that species, of Salvador, the flowers are glabrous or nearly so, and the leaves cuneately acute at the base and with distinct venation.

Hyperbaena isophylla, sp. nov.—Ramuli graciles teretes striati glabri, olivacei vel grisei, internodiis brevibus vel elongatis; petioli graciles 1.5-2.2 cm. longi, subteretes, prope apicem paullo tumidi; lamina coriacea, lucida, integra, elliptico-oblonga vel lanceolato-oblonga, 10-13 cm. longa, 4-5 cm. lata, acuminata, basi acuta et interdum plus minusve inaequalis, costa ut nervi et nervuli utrinque prominente, nervulis arcte reticulatis, fere concolor, pinnatinervia, costa gracili, nervis lateralibus utroque latere c. 6, inaequalibus, angulo acuto adscendentibus, arcuatis, prope marginem irregulariter conjunctis; paniculae masculae fasciculatae, axillares et e ramulis defoliatis nascentes, laxe multiflorae, petiolis multo longiores, ramis gracillimis dense puberulis, floribus breviter pedicellatis, bracteis et bracteolis minutis dense pilosulis; flores in alabastro vix 1 mm. diam., puberuli.—Costa Rica: Santo Domingo de Golfo Dulce, in 1896, *A. Tonduz 7232* (Herb. Field Mus. No. 195,419, type).

The leaves are somewhat like those of *H. phanerophlebia* Standl., but in that species the blades are commonly more or less 3-nerved or triplinerved, and the flowers are glabrous or nearly so.

MYRISTICACEAE

Dialyanthera multiflora, sp. nov.—Arbor 9-metralis, trunco 10 cm. diam., ramulis gracilibus teretibus, vetustioribus ochraceis vel brunnescentibus, novellis glabris vel sparse et minutissime puberulis, internodiis plerumque 5-8 mm. longis; folia alterna petiolata, petiolo gracili 5-8 mm. longo sparse et minute puberulo vel glabrato supra sulcato; lamina coriacea, lanceolato-oblonga, 5-8 cm. longa, 1.5-2.5 cm. lata, acuta vel sensim acuminata, apice ipso obtuso, basi acuta, glabra, supra viridis, minute pallido-puncticulata, nervis subimpressis, subtus pallida, costa gracili elevata, nervis lateralibus utroque latere c. 13, angulo lato adscendentibus, prominentibus, subarcuatis, prope marginem conjunctis; inflorescentiae laterales, floribus umbellatis, umbellis plerumque 5-7-floris, racemosis vel paniculatis, paniculis anguste pyramidalibus pedunculatis 3-6 cm. longis, pedunculis infimis plerumque 6-10 mm. longis, sparse puberulo-tomentellis, superioribus multo brevioribus,

divaricatis; flores pedicellati, pedicellis gracilibus 2-4 mm. longis dense tomentellis; perianthium 1.5-2 mm. longum dense ochraceo-tomentosum, in alabastro obovoideum et apice obtusum.—British Honduras: In jungle, Stann Creek Railway, alt. 30 m., July 16, 1929, *W. A. Schipp 279* (Herb. Field Mus. No. 598,216, type).

The small leaves recall those of *D. acuminata* Standl., of Panama, but in the latter the leaves have long and narrow acuminations and longer petioles, and the inflorescences are few-flowered and but little longer than the petioles.

CRUCIFERAE

Sisymbrium Storkii, sp. nov.—Herba ramosa, ramis crassiusculis teretibus satis dense pilis longis mollibus albidis pilosis; folia caulina sessilia, obovato-oblonga vel lanceolato-oblonga, 4-8 cm. longa, 1-2.5 cm. lata, herbacea, acuminata, basi versus paullo angustata, basi ipsa breviter cordata et amplexicauli, auriculis rotundatis 2-4 mm. longis, subintegra vel remote serrato-denticulata, utrinque albido-pilosa; racemi 20-30 cm. longi et ultra, remotiflori, rhachi glabra valida, pedicellis late adscendentibus solitariis 3-6 mm. longis glabris; sepala purpurascentia oblonga obtusa glabra 2 mm. longa; stamina sepalis aequilonga, filamentis crassis, antheris oblongis; siliqua linearis subteres 2-3 cm. longa glabra, valvis tenuiter trinerviis, rostro crasso cylindraceo 1.5 mm. longo.—Costa Rica: El Roble, alt. 2,850 m., common in forest, May 16, 1928, *H. E. Stork 2005* (Herb. Field Mus. No. 598,852, type).

Sisymbrium costaricense Standl., the only other representative of the genus known from Costa Rica, has glabrous stems and leaves and slightly larger flowers.

LEGUMINOSAE

Schrankia Nuttallii (DC.), comb. nov. *Leptoglottis Nuttallii* DC. Mém. Légum. 451. 1825. *S. uncinata* T. & G. Fl. N. Amer. 1: 400. 1840.

Schrankia hystricina (Small), comb. nov. *Leptoglottis hystricina* Small ex Britt. & Rose, N. Amer. Fl. 23: 139. 1928.

Schrankia paucijuga (Britt. & Rose), comb. nov. *Leptoglottis paucijuga* Britt. & Rose, N. Amer. Fl. 23: 139. 1928.

Schrankia occidentalis (Woot. & Standl.), comb. nov. *Morongia occidentalis* Woot. & Standl., Contr. U. S. Nat. Herb. 16: 135. 1913.

Schrankia Halliana (Britt. & Rose), comb. nov. *Leptoglottis Halliana* Britt. & Rose, N. Amer. Fl. 23: 141. 1928.

Schrankia confusa (Britt. & Rose), comb. nov. *Leptoglottis confusa* Britt. & Rose, N. Amer. Fl. 23: 141. 1928.

Schrankia microphylla (Dryand.), comb. nov. *Mimosa microphylla* Dryand. ex J. E. Sm., Insects Georgia 2: 123. 1797. *S. uncinata* Willd. Sp. Pl. 4: 1043. 1806.

Schrankia Palmeri (Britt. & Rose), comb. nov. *Leptoglottis Palmeri* Britt. & Rose, N. Amer. Fl. 23: 143. 1928.

Hymenaea Courbaril L.—If one were to read the description of *Inga megacarpa* Jones (Contr. West. Bot. 15: 140. 1929), and attempt to place the plant by description alone, one would probably encounter some difficulty. Examination of the type collection, however, shows at once that the "*Inga*" is really *Hymenaea Courbaril*, one of the most common trees of the Pacific coast of Mexico. The leaflets are, of course, a single pair, as usual, not "about 5 pairs," as described by the author.

Parosela Gaumeri, sp. nov.—Frutex glaber vel fere glaber, ramulis gracillimis ochraceis glandulis numerosis elevatis nigrescentibus conspersis; rhachis cum petiolo 7-14 mm. longa, glandulosa, interdum prope basin minute puberula, non alata; stipulae anguste subulatae 1-1.5 mm. longae; stipellae minutae glanduliformes; foliola c. 7, oblonga vel cuneato-oblonga, 4-7 mm. longa, 2-4 mm. lata, apice late rotundata, basi obtusa, supra viridia, subtus paullo pallidiora, dense glandulis magnis conspersa, petiolulis 0.7 mm. longis; spicae solitariae vel paniculatae, terminales, sessiles vel breviter pedunculatae, 1-1.5 cm. longae, subdensae, pauci- vel multiflorae, floribus sessilibus, rhachi saepe flexuosa, dense glandulis magnis elevatis fuscis onusta; bracteae caducae ovatae subulato-cuspidato-acuminatae, glabrae, glandulosae, calyce multo breviores; calyx 3-3.5 mm. longus, extus glaber, 10-costatus, glandulis magnis elongatis inter costas onustus, fauce dense barbata, lobis subulato-acuminatis apice saepe incurvis inaequalibus, lobo maximo tubum fere aequante, ceteris multo brevioribus; petala in sicco ochroleuca, vexillo 5 mm. longo, alis carinaque brevioribus.—Yucatan: Chichankanab, *G. F. Gaumer 1457* (Herb. Field Mus. No. 57,386, type). San Anselmo, *Gaumer 1727*. Pocoboch, *Gaumer 2408*.

The plant is a well-marked species, perhaps referable to Rydberg's group *Thyrsiflorae*, although certainly very different from any of the species placed in it.

Chaetocalyx vestita, sp. nov.—Herba gracilis volubilis ramosa, caulibus dense pilis gracilibus patentibus pilosis; stipulae lanceolatae 3-4 mm. longae attenuatae virides pubescentes; folia pinnata 5-foliolata petiolata, rhache dense breviterque pilosa, foliolis breviter petiolulatis ovalibus vel oblongo-ovalibus 1.2-3 cm. longis, 0.7-1.3 cm. latis, utrinque rotundatis, apice apiculatis, tenuibus, supra viridibus et curvo-puberulis, subtus pallidioribus, dense pilis brevibus saepe curvis plerumque fulvis pilosis; flores in axillis fasciculati, pedicellis 8-12 mm. longis gracilibus dense pilosis; calyx 6-7 mm. longus dense pilosus, pilis paucis crassioribus lutescentibus interdum admixtis, lobis triangularibus vel lanceolato-triangularibus acutis vel acuminatis plerumque tubo brevioribus; vexillum suborbiculare

12-15 mm. longum apice profunde emarginatum, extus dense pilis brevibus albidis adpressis pubescens; alae vexillo aequilongae glabrae; legumen lineare 7.5-11 cm. longum, 1.5 mm. latum, dense pubescens, c. 10-articulatum, apice versus stylum gracilem longi-attenuatum, segmentis c. 1 cm. longis conspicue longitrorsum striatis.—Yucatan: Xnocac, December, 1916, *G. F. Gaumer 23509* (Herb. Field Mus. No. 460,300, type). Buena Vista Xbac, *Gaumer 1077*. San Anselmo, *Gaumer 2165*. Without definite locality, *Gaumer 24117*.

No other representative of the genus *Chaetocalyx* (as now restricted) is known from Mexico, and only one, *C. latisiliqua* (Desv.) Benth., from Central America. The Yucatan plant is related to *C. hebecarpa* Benth., a South American species.

Hedysarum americanum (Michx.) Britton, f. **albiflorum**, f. nov.—Petala alba.—Alaska: Davidson Glacier, July 4, 1929, *William S. Cooper & Frances E. Andrews 95* (Herb. Field Mus. No. 598,264, type).

In the usual form of the species the corolla is purple.

Dalbergia glabra (Mill.), comb. nov. *Robinia glabra* Mill. Gard. Dict. ed. 8. *Robinia* No. 5. 1768. *D. campechiana* Benth. Journ. Linn. Soc. 4: Suppl. 37. 1860.

This species has been collected recently in British Honduras: Honey Camp, August, 1929, *C. L. Lundell 305*.

Machaerium Merrillii, sp. nov.—Frutex scandens c. 15-metralis, ramulis validis teretibus cinnamomeis, novellis pilis longis stramineis divaricatis basi valde dilatatis hispidis, quoque albido-pilosis atque plus minusve albido-tomentosis, ramis vetustioribus basibus pilorum persistentibus asperis; stipulae persistentes spinosae et induratae, crassae, acutae, plerumque 5-7 mm. longae, puberulae et tomentellae; folia 7-11 cm. longa, breviter petiolata, petiolo ut rhachis gracili, dense puberulo; foliola c. 45, brevissime petiolulata, oblonga, 5-9 mm. longa, c. 3 mm. lata, retusa, basi oblique rotundata, supra viridia, enervia, glabra, subtus pallidiora, ad costam elevatam minute puberula vel glabrata, aliter glabra, nervis lateralibus obsoletis; flores paniculati, paniculis angustis laxe multifloris 8-18 cm. longis inflorescentiam amplam terminalem efformantibus, ramis hispidis et tomentellis, pedicellis 1-2 mm. longis validis, bracteolis rotundatis concavis c. 3 mm. longis puberulis striatis; calyx anguste campanulatus 5 mm. longus breviter lobatus, lobis late rotundatis, sericeus; vexillum 8 mm. longum profunde emarginatum, extus dense albido-sericeum, alis et carina glabris; legumen immaturum 3.5 cm. longum, ala tenui apicem versus 1 cm. lata, dense pilosa, parte seminifera dense stramineo-hispida.—British Honduras: In jungle, Stann Creek Railway, alt. 15 m., April 2, 1929, *W. A. Schipp 113* (Herb. Field Mus. No. 593,114, type).

A woody vine, climbing high over tall forest trees, the trunk about 10 cm. in diameter. Flowers pale pink.

In most characters this plant resembles *M. setulosum* Pittier, of southern Mexico. In the latter, however, the leaflets are several times as large, and the pubescence is different.

At the collector's request, this species is named for Dr. Elmer D. Merrill.

Cicer arietinum L.—This is a fairly well-known plant, supplying, as it does, one of the chief foods of the Iberian Peninsula, the garbanzo or chick-pea. In Mexico, likewise, it is a favorite food, procurable in any village market, and planted in wide fields, like beans or maize. It was inevitable that it should attract the attention of one unfamiliar with the region, yet that is perhaps not sufficient reason for describing this Old World plant as a new species, and in a genus other than that to which it really belongs. To the synonymy of *Cicer arietinum* must be added the following quite superfluous name: *Ononis crotalarioides* Jones, Contr. West. Bot. 15: 138. 1929.

RUTACEAE

Zanthoxylum trichilioides, sp. nov.—Ramuli inermes, validi et crassissimi, grisei, ad apices dense foliati, pilulis griseis vel lutescentibus minute stellato-tomentosi; folia imparipinnata petiolata, petiolo 3-5 cm. longo, rhachi 7-11 cm. longa gracili stellatim griseo-tomentulosa; foliola 9-13, oblonga vel lanceolato-oblonga, 3.5-8 cm. longa, 1-2 cm. lata, acuminata vel longiacuminata, basi obliqua, uno latere rotundata, alio acuta, subcoriacea, in sicco nigrescentia, opaca, glandulis numerosis pellucido-punctata, supra lucida, sparse minuteque stellato-pubescentia, subtus paullo pallidiora, primo subdense stellato-pubescentia, cito glabrata, margine fere integro subrevoluto; paniculae terminales 7-10 cm. longae multi-ramosae sessiles foliis breviores, ramis stellato-pubescentibus; pedicelli florum femineorum fere 2 mm. longi validi; calyx 1 mm. latus persistens, sepalis 5 ovatis; petala 5 lineari-oblonga 2 mm. longa obtusa extus stellato-pubescentia; ovarium 1 dense tomentosum sessile, stigmate sessili; folliculus 1 oblique obovoideus 3 mm. longus stellato-pubescens, basi abrupte contractus, glandulis numerosissimis parvis elevatis conspersus.—Yucatan: Without definite locality, in 1917-21, *G. F. Gaumer 24014* (Herb. Field Mus. No. 552,017, type), *24339*, *24005*.

The nearest relative of this Yucatan species is *Z. microcarpum* Griseb., which has conspicuously crenate leaflets, obtuse to merely acute at the apex, and few large glands on the follicles.

MALPIGHIACEAE

Byrsonima bucidaefolia, sp. nov.—Ramuli grisei apice dense foliati, novellis dense sericeis mox glabratis; petioli usque ad 5 mm.

longi pilis rufis adpresso-pilosi; lamina obovata vel cuneato-obovata, 5-8 cm. longa, 2.5-3.5 cm. lata, apice late rotundata, saepe emarginata, basi cuneata vel late cuneata, tenuis, supra viridis, glabra vel pilis paucis laxis deciduis induta, subtus pallidior, laxe pilis albidis tomentosa, marginibus saepe revolutis; racemi pedunculati foliis subaequales, multiflori, rhachi c. 5 cm. longa pilis lucidis ferrugineo-tomentosa, pedicellis 4-8 mm. longis tomentosis; bracteae ovatae obtusae 3 mm. longae extus tenuiter tomentosae, intus glabrae, bracteolis rotundato-ovatis usque ad 2 mm. longis, prope basin pedicelli insertis; sepala 3-3.5 mm. longa ovata obtusa superne tenuiter tomentosa, glandulis 2 magnis basalibus sepalis duplo brevioribus; petala longe unguiculata in sicco rubescentia, glabra, lamina reniformi 5 mm. lata grosse dentata; antherae connectivum vix loculis aequilongum; fructus globosus 8 mm. diam. glaber, stylis persistentibus 3-4 mm. longis.—Yucatan: Kancabtsonot, May, 1917, *G. F. Gaumer 23869* (Herb. Field Mus. No. 466,338, type). Without definite locality, *Gaumer 24012, 24391, 23966.*—British Honduras: Honey Camp, September, 1929, *C. L. Lundell 353.*

A good many species of *Byrsonima* have been described or reported from Mexico and Central America, but all or most of them seem to me to be mere forms of the variable *B. crassifolia* (L.) DC. This Yucatan plant, however, is so strikingly different, and so uniform in its foliage characters, that it seems safe to regard it as a distinct species.

POLYGALACEAE

Bredemeyera lucida (Benth.) Benn.—The genus *Bredemeyera* has not been known previously from North America, although well represented in South America. The following collection seems to be referable to *B. lucida*: British Honduras: Stann Creek Railway, alt. 15 m., in jungle, April 4, 1929, *W. A. Schipp 169.* The plant is reported to be a subscandent shrub 2.5 m. high, with stems 5 cm. in diameter. The collector states that it is rare in the region.

DICHAPETALACEAE

Dichapetalum Donnell-Smithii Engler, Bot. Jahrb. Engler 23: 144. 1896.

This species has been known from Guatemala and Salvador, and it may now be reported for a third country of Central America: British Honduras: Middlesex, alt. 60 m., on river bank, a vine 9 m. long, the stem 5 cm. in diameter, the flowers cream-colored, September, 1929, *W. A. Schipp 378.* Same locality, in jungle, a shrub of 2 m., in fruit, September, 1929, *Schipp S.26.*

EUPHORBIACEAE

Acalypha chlorocardia, sp. nov.—Frutex metralis, trunco 2.5 cm. diam., ramulis novellis crassis subteretibus viridibus subdense pilis longis albidis patentibus hirsutis, internodiis brevibus; stipulae c. 1 cm. longae lineari-subulatae longe attenuatae dense hirsutae secus margines glanduloso-denticulatae; folia crasse membranacea longissime petiolata, petiolo gracili 12-16 cm. longo hirtello et plus minusve hirsuto subtereti; lamina ovata vel late ovata, 12-15 cm. longa, 7-9 cm. lata, longe et subabrupte sensimve acuminata, acumine angusto longe attenuato, basi late rotundata et cordata, sinu 5-10 mm. longo, arcte adpresso-serrata, supra viridis, undique subsparse hirsuta, subtus vix pallidior, undique subsparse hispidula, basi 5-7-nervia; spicae terminales femineae 19 cm. longae subdensae, e basi interdum breviter ramosae, bracteis numerosis, inferioribus foliis conformibus breviter petiolulatis, usque ad 7 cm. longis, longe angusteque acuminatis, superioribus sessilibus et cordato-amplectentibus, c. 1 cm. longis, utroque latere c. 7-serratis, acuminatis, adpresso-hispidulis, supremis 5 mm. tantum longis, acutis, crenato-serratis; flores sessiles; ovarium dense hispidulum; styli rami pectinatim multilacinuligeri.—British Honduras: Middlesex, on river bank, alt. 60 m., September 16, 1929, *W. A. Schipp S.45* (Herb. Field Mus. No. 602,936, type).

Among the Central American species of *Acalypha* this plant is conspicuous because of the very large, leaf-like pistillate bracts.

Croton Millspaughii, sp. nov.—Frutex, ramulis gracilibus, vetustioribus teretibus griseis rimosis et lenticellatis, novellis olivaceis glabris, internodiis brevibus; stipulae c. 4 mm. longae fere ad basin in lacinias paucas filiformes apice glandulo-incrassatas glabras dissectae, persistentes; folia longe petiolata alterna crasse herbacea, petiolo gracili 8-12 mm. longo glabro subtereti; lamina ovata vel oblongo-ovata, 1.7-3 cm. longa, 1-1.5 cm. lata, sensim acuminata, basi obtusa vel rotundata, utrinque glabra vel subtus hinc inde pilo stellato parvo onusta, integra vel subintegra, basi trinervia, costa utroque latere venas c. 4 inconspicuas emittente, subtus paullo pallidior, ciliata, ciliis subremotis 1-1.5 mm. longis apice glanduloso-incrassatis; racemi terminales vel ex axillis superioribus, 1-3 cm. longi, dense pauciflori, floribus 1-2 mm. longe pedicellatis; sepala floris masculi ovali-ovata 1.5 mm. longa obtusa, extus glabra vel hinc inde pilo minuto stellato induta; sepala floris feminei oblonga 2 mm. longa obtusa, extus glabra, glanduloso-ciliata; styli rami paucilacinulati, ramulis elongatis filiformibus.—Yucatan: Cozumel Island, February 21, 1899, *C. F. Millspaugh 1593* (Herb. Field Mus. No. 61,593, type).

The vernacular name is "picosa." The plant has been reported as *C. ciliato-glandulosus* Ort., which it closely resembles. That common species of Mexico and northern Central America may be distinguished at a glance by its dense covering of stellate pubescence.

Pera barbellata, sp. nov.—Arbor 9-metralis, trunco 15 cm. diam., ramulis gracilibus teretibus, novellis dense stellato-lepidotis, internodiis brevibus; folia alterna breviter petiolata, petiolo crassiusculo 5-7 mm. longo lepidoto supra sulcato; lamina subcoriacea, oblongo-elliptica, 4-6.5 cm. longa, 2.5-3.5 cm. lata, abrupte acuminata, acumine obtusissimo, basi acuta vel abrupte contracta et decurrens, supra ad costam minute puberula, aliter glabra, lucida, nervis prominulis, subtus concolor, sublucida, sparse stellato-lepidota, in axillis dense breviterque barbata, costa gracili elevata, nervis lateralibus utroque latere c. 13, angulo lato adscendentibus, fere rectis, remote a margine arcuato-conjunctis, nervulis obscuris; flores in axillis vel ad nodos defoliatos fasciculati, pedicellis fructiferis 2-3 mm. longis dense stellato-puberulis; capsula (perfecta non visa) 8-10 mm. longa, minutissime denseque stellato-puberula. —British Honduras: In jungle, Mullins River road, alt. 30 m., June 8, 1929, *W. A. Schipp 201* (Herb. Field Mus. No. 598,227, type).

In *P. arborea* Mutis, the only other species known from Central America, the leaves are mostly rounded at the base, and they are not barbate beneath.

HIPPOCRATEACEAE

Salacia belizensis, sp. nov.—Frutex scandens 9 m. longus, trunco 10 cm. diam., ramulis validis teretibus griseis minute lenticellatis; folia coriacea breviter petiolata glabra, petiolo crasso 4-7 mm. longo supra sulcato; lamina oblonga vel lanceolato-oblonga, 8-16.5 cm. longa, 3-6 cm. lata, acuminata vel longe acuminata, apice obtuso, basi acuta vel obtusa, supra lucida, costa nervisque prominulis, subtus plus minusve lucida, costa crassiuscula elevata, nervis lateralibus utroque latere c. 8, elevatis, angulo lato adscendentibus, gracilibus, curvis, irregularibus, juxta marginem conjunctis, nervulis prominulis reticulatis, margine saepe revoluta; inflorescentiae dense multiflorae cymoso-paniculatae paniculis usque ad 13 cm. longis, ramis glabris crassiusculis dichotomis, floribus 1-1.5 mm. longe pedicellatis, bracteis late ovatis 0.6-1 mm. longis acutis glabris; sepala late ovata obtusa 0.6 mm. longa glabra; petala 5 ovalia 1.5 mm. longa apice rotundata minute erosa vel fere integra; fructus globosus 2.5 cm. diam. lenticellatus, pedicello incrassato c. 1 cm. longo.—British Honduras: In jungle, Mullins River road, alt. 15 m., April 10, 1929, *W. A. Schipp 128* (Herb. Field Mus. No. 593,117, type).

"A large climbing shrub, plentiful in this locality. Flowers green."

Hippocratea yucatanensis, sp. nov.—Frutex alte scandens, ramulis teretibus griseis, novellis compressis sparse minuteque puberulis; petioli validi 6-10 mm. longi, supra breviter sulcati, minute puberuli; lamina elliptico-ovalis vel oblongo-elliptica, 5-9.5 cm. longa, 2.2-5 cm. lata, obtusa, basi obtusa vel acutiuscula, subcoriacea, concolor, brevissime remoteque crenato-serrata, supra glabra,

costa elevata, subtus interdum ad costam elevatam sparse puberula, aliter glabra, nervis lateralibus utroque latere c. 6, gracillimis, arcuato-adscendentibus, prope marginem irregulariter conjunctis; cymae pauciflorae foliis duplo breviores, in axillis solitariae, pedunculo valido 1.2-2.5 cm. longo compresso minute puberulo; bracteae usque ad 1.5 mm. longae ovatae; pedicelli interdum 4 mm. longi, vulgo c. 1 mm.; calyx c. 2 mm. latus, sepalis late rotundatis minute ciliolatis; petala ovalia fere 4 mm. longa apice rotundata glabra; discus magnus depressus; antherae 0.8 mm. latae; fructus ignotus.—Yucatan: Kancabtsonot, May, 1917, *G. F. Gaumer 23859* (Herb. Field Mus. No. 466,318, type). Izamal, *Gaumer 718*. Chichankanab, *Gaumer 1371*. Without definite locality, *Gaumer 2366, 23994*.

Related, perhaps, to *H. elliptica* HBK., of western Mexico, in which the petals are barbate within. The plant has been reported from Yucatan as *H. obcordata* Lam.

CELASTRACEAE

Wimmeria obtusifolia, sp. nov.—Ramuli teretes, novellis obscure et minutissime puberulis; petioli graciles 4-5 mm. longi minute puberuli; lamina elliptica vel oblongo-elliptica, prope medium latissima, 3.5-4 cm. longa, 1.4-2 cm. lata, versus apicem obtusum interdum emarginatum angustata, basi acuta, concolor, ut videtur integra sed minutissime remoteque adpresso-serrulata, statu juvenili minutissime et inconspicue ad nervos puberula, costa gracili utrinque elevata, nervis lateralibus utroque latere c. 4, angulo acuto adscendentibus, prope marginem irregulariter conjunctis, supra elevatis; cymae in axillis solitariae, plerumque foliis duplo breviores, vulgo 2-4-florae, pedunculo gracili 8-12 mm. longo minute puberulo, pedicellis gracilibus viridibus minute puberulis 5-6 mm. longis patentibus; bracteae vix 1 mm. longae, bracteolis minutis prope basin pedicelli insertis; calyx 2.5 mm. latus, sepalis late rotundatis imbricatis viridescentibus; petala oblongo-ovalia, 3 mm. longa, apice rotundata, glabra; fructus ignotus.—Yucatan: Without definite locality, in 1917-21, *G. F. Gaumer 24259* (Herb. Field Mus. No. 552,264, type).

Closely related to *W. confusa* Hemsl., of northern and western Mexico, in which the leaves are usually smaller, widest near the apex, and conspicuously crenate.

SAPINDACEAE

Cupania auriculata, sp. nov.—Arbor 9-metralis, trunco 10 cm. diam., ramulis validis subteretibus lenticellatis minute puberulis vel glabratis; folia 5-7 cm. longe petiolata, petiolo subtereti puberulo vel minute sericeo; foliola c. 10 alterna, 3-9 mm. longe petiolulata, petiolulo supra sulcato, oblonga, 10-12 cm. longa, 4.5-5 cm. lata, breviter acuminata vel saepe subrotundata et caudato-acuminata, acumine c. 1 cm. longo, basi obtusa vel truncata, vulgo valde inae-

qualia, uno latere interdum decurrentia, coriacea, undulata vel sinuata vel fere integra, basi latere superiore plerumque hastato-lobata, lobo brevi rotundato-ovato acuto vel apiculato, supra lucida, glabra vel ad nervos minute puberula, costa nervisque elevatis, subtus glabra vel ad nervis minute sparseque sericea, costa nervisque valde elevatis, nervis lateralibus utroque latere c. 11, angulo lato adscendentibus, subarcuatis, marginem attingentibus, nervulis prominentibus arcte reticulatis; paniculae terminales et ex axillis superioribus nascentes, sessiles vel pedunculatae, foliis longiores, c. 30 cm. longae, multiramosae, dense multiflorae, angustae, ramis dense minuteque cinereo-sericeis, floribus aggregatis brevissime pedicellatis vel subsessilibus; bracteae subulatae plerumque 3-5 mm. longae; sepala oblonga vel ovalia 2-2.5 mm. longa obtusa dense puberula; petala ochroleuca sepala vix aequantia glabra; stamina petalis paullo longiora, pistillo 3-3.5 mm. longo.—British Honduras: Stann Creek Railway, in broken pine ridge jungle, alt. 15 m., July 20, 1929, *W. A. Schipp 267* (Herb. Field Mus. No. 598,228, type).

"Flowers fragrant." The proposed species may be recognized readily by the peculiar auricled leaflets.

Talisia diphylla, sp. nov.—Arbor 12-metralis, ramulis subteretibus griseis vel fusco-ferrugineis, glabris, dense foliatis, lenticellis numerosis parvis pallidis conspersis, internodiis brevissimis; folia plerumque bifoliolata, inferiora simplicia et foliolo similia; petioli validi 2.5-6 mm. longi glabri; foliola oblonga vel oblanceolato-oblonga, 5-8 cm. longa, 1.5-3 cm. lata, apice obtusa vel interdum rotundata et breviter emarginata, versus basin sessilem obliquam acute angustata, subcoriacea, glabra, integra, supra viridia et lucida, subtus pallida et opaca, costa subtus prominente, venis lateralibus utrinque prominulis, utroque latere c. 7, fere rectis, prope marginem irregulariter conjunctis; paniculae terminales sparse ramosae, folia aequantes vel paullo longiores, 5-6 cm. longae, ramis minute puberulis, bracteis minutis, pedicellis 8-12 mm. longis puberulis; sepala ovalia c. 3 mm. longa, in statu fructifero persistentia et reflexa, utrinque minute tomentosa; fructus immaturus subglobosus 7 mm. diam. plus minusve asymmetricus, primo sparse adpresso-pilosus, mox glabratus, stylo persistente 1-1.5 mm. longo.—Yucatan: In forest, Kancabtsonot, February, 1917, *G. F. Gaumer 23573* (Herb. Field Mus. No. 465,952, type).

It is not quite certain that this tree belongs to the genus *Talisia,* but it seems to agree better with that than with any other group of the Sapindaceae represented in Mexico and Central America. The only species known previously from Mexico, *T. olivaeformis* (HBK.) Radlk., has four leaflets.

Serjania yucatanensis, sp. nov.—Frutex alte scandens, ramulis vetustioribus subteretibus griseis, novellis brunnescentibus 6-sulcatis glabris, internodiis elongatis; corpus lignosum e centrali

subtereti et peripheriicis 3 parvis approximatis semiteretibus compositum; petioli validi 3-5 cm. longi glabri; folia palmatim 3-foliolata, foliolis sessilibus, ovatis, elliptico-oblongis vel ellipticis, 5-14 cm. longis, 3-7 cm. latis, versus apicem obtusum vel acutiusculum angustatis, basi acutis et abrupte in acuminationem longam petioliformem contractis, versus apicem breviter et remote grosseque crenato-serratis vel saepius integris vel subintegris, subcoriaceis, glabris, supra viridibus, subtus multo pallidioribus; paniculae in axillis foliorum reductorum insertae, breviter vel longe pedunculatae, multiflorae, subdensae, 5-9 cm. longae, ramis sparse minuteque tomentulosis vel glabratis, pedicellis plerumque 2-3 mm. longis, bracteis minutis et inconspicuis; sepala interiora 3-3.5 mm. longa, concava, subdense tomentosa, exteriora breviora, rotundata, minus dense tomentosa; petala sepalis interioribus subaequalia, glabra; fructus (immaturus) glaber, dissepimentis latis, lateribus loculi firme coalitis, loculis 5 mm. longis latisque, irregulariter grosseque exsculptis, ala 13 mm. longa et 10 mm. lata.—Yucatan: Chichankanab, April, 1917, *G. F. Gaumer 23676* (Herb. Field Mus. No. 466,093, type). Kancabtsonot, *Gaumer 23596, 23595.* Chichankanab, *Gaumer 23715.* Without definite locality, *Gaumer 24419; Dr. Johnson.* Cozumel Island, *Millspaugh 1533, 1554.*

In a genus so complex as *Serjania,* it is difficult to suggest relationships of species with reasonable accuracy, and any suggestion is likely to be misleading. In the writer's key to the Mexican species (Contr. U. S. Nat. Herb. 23: 692. 1923) this Yucatan plant runs at once to *S. heterocarpa* Standl., a species to which it is not closely related.

RHAMNACEAE

Colubrina guatemalensis, sp. nov.—Ramuli graciles teretes vel subangulati, novellis breviter sordido-pilosis, internodiis brevibus; folia alterna petiolata, petiolo gracili 7-13 mm. longo pilosulo vel puberulo; lamina subcoriacea, oblongo-ovata, 4.5-7 cm. longa, 2-3.5 cm. lata, longe acuminata, basi obtusa vel subrotundata et abrupte breviterque cuneato-decurrens, remote crenato-serrata, serraturis adpressis obtusis, supra griseo-viridis, subsparse breviterque pilosula, nervis impressis, subtus pilis brunnescentibus mollibus patentibus saepe crispulis satis dense tomentosa, trinervia, costa nervisque prominentibus, costa utrinque nervos 3-4 laterales angulo acuto adscendentes percurrentes emittente; flores in axillis fasciculati, pedicellis gracilibus 5-7 mm. longis puberulis; hypanthium statu fructifero pilosulum, sepalis reflexis late triangularibus acutis 1.5 mm. longis; capsula globosa apice depressa glabra 5-6 mm. longa; semina obovoidea 4 mm. longa lucida.—Guatemala: San Martín, Dept. Chimaltenango, alt. 1,800 m., November, 1928, *Jesús Morales R. 1230* (Herb. Field Mus. No. 599,616, type).

This Guatemalan species is clearly related to *C. Ehrenbergii* Schlecht., but in that Mexican shrub the leaves are mostly obtuse

or only acutish, and thicker and more conspicuously veined than in *C. guatemalensis*, and there is an abundant reddish tomentum on the leaves and young branches.

VITACEAE

Cissus gossypiifolia, sp. nov.—Frutex scandens, ramulis gracilibus subteretibus ferrugineis glabris, vetustioribus lenticellis magnis elevatis dense conspersis; folia longe petiolata, petiolo 2.5-5 cm. longo gracili glabro; laminae plus minusve dimorphae, glabrae, lamina foliorum majorum 9-11 cm. longa et c. 8 cm. lata, basi truncata vel breviter cordata, lateribus subparallelis et fere rectis, remote adpresso-serrulatis vel fere integris, supra medium breviter triloba, lobis lateralibus triangularibus acuminatis 1-1.5 cm. longis, lobo terminali multo latiore abrupte sensimve acuminato, lamina basi 5-nervia, lamina foliorum superiorum ovata vel elliptica, 5.5-8 cm. longa, remote et adpresse serrulata vel interdum breviter triloba, acuta vel acuminata, basi obtusa vel rotundata, basi trinervia; cymae laxe multiflorae c. 2 cm. longe pedunculatae, c. 3 cm. latae, ramis pedicellisque glabris, pedicellis validis 2-3 (in fructu ad 5) mm. longis; calyx latus c. 0.3 mm. altus truncatus; petala 4 oblonga obtusa glabra 1.8 mm. longa; bacca obovoidea 6 mm. longa apice rotundata et apiculata.—British Honduras: Honey Camp, Orange Walk, September, 1928, *C. L. Lundell 25* (Herb. Field Mus. No. 580,827, type), *26*.

The larger leaves bear a striking resemblance to those of some species of *Gossypium*, and the species may be recognized easily by their distinctive form.

Cissus formosa, sp. nov.—Frutex alte scandens, ramulis vetustioribus fusco-ferrugineis lenticellis paucis elevatis onustis, novellis subteretibus viridibus glabris, internodiis 2-5 cm. longis; petioli 1.5-5.5 cm. longi graciles glabri; laminae valde variabiles, foliorum superiorum simplices, deltoideo-rotundatae, c. 7 cm. longae et latae, abrupte breviacuminatae, basi truncatae, remote et irregulariter serratae, serraturis paucis; laminae foliorum inferiorum vulgo breviter vel profundius (vix ad medium) 3- vel rare 5-lobae, 7-14 cm. longae, 8-12 cm. latae, basi truncatae vel concavae, interdum abrupte breviterque decurrentes, lobis acutis vel acuminatis vel abrupte breviterque cuspidato-acuminatis, remote adpresso-serratis, lamina subtenui, glabra, basi 3-nervia, nervis lateralibus 3 ramos exteriores emittentibus; cymae ad axillas solitariae, intense purpureo-rubrae, 1.5-3 cm. latae, densae, multiflorae, pedunculo 1.5 cm. longo sparse puberulo, pedicellis vix 2 mm. longis; calyx 1 mm. longus subtruncatus; petala 2 mm. longa extus sparse minuteque adpresso-pilosa; bacca obscure purpureo-rubra.—Yucatan: Suitún, July, 1916, *G. F. Gaumer 23389* (Herb. Field Mus. No. 460,122, type). Chichankanab, *Gaumer 23713*. Without definite locality, *Gaumer 24312*.

Dr. Gaumer states that the plant is very showy because of the deep crimson inflorescences and fruits. Some of the other Mexican and Central American species also are strikingly handsome when in full flower. This Yucatan *Cissus* is related to *C. microcarpa* Vahl and *C. rhombifolia* Vahl, both of which have trifoliolate leaves.

MALVACEAE

Abutilon Gaumeri, sp. nov.—Frutex, ramulis vetustioribus teretibus griseis vel fusco-ferrugineis glabratis, novellis dense pilis brevibus patentibus brunnescentibus stellato-tomentosis; petioli validi 1.2-3.5 cm. longi dense tomentosi; laminae inaequales et variabiles, plerumque late cordato-ovatae, interdum orbiculari-cordatae vel late rhombico-obovatae, 3-7 cm. longae, 2-5 cm. latae, longiacuminatae vel acutae vel interdum obtusae, rare rotundatae, basi plerumque leviter cordatae, interdum rotundatae, plerumque integrae, utrinque (subtus densius) dense pilis patentibus fulvis stellatis velutino-tomentosae, basi 7-nervia; flores in axillis solitarii vel plerumque 2-3-fasciculati, pedicellis subgracilibus 2-2.8 cm. longis ad medium vel paullo supra medium articulatis dense stellato-tomentosis; calyx 7 mm. longus dense pilis fulvis stellato-tomentosus, profunde 5-lobus, carpella fere aequans et eis adpressus, lobis late ovatis vel rotundato-ovatis acutiusculis; carpella plerumque 8 biovulata 7 mm. longa, apice acuta vel acutiuscula, dorso et apice dense pilis patentibus fulvis stellato-tomentosa.—Yucatan: Without definite locality, in 1917-21, *G. F. Gaumer 24072* (Herb. Field Mus. No. 552,076, type). Also *No. 24046*.

In the key to the species of *Abutilon* in the Trees and Shrubs of Mexico this plant will run to *A. sphaerostaminum* Hochr., which is a quite different plant with cordate sepals and much larger carpels.

Sida cordifolia L.—To the synonymy of this common tropical American weed may be added the following name: *Sida ampla* Jones, Contr. West. Bot. 15: 146. 1929.

Pavonia integrifolia, sp. nov.—Suffruticosa?, caulibus dense foliatis crassiusculis stellato-pubescentibus; stipulae filiformi-subulatae c. 1 cm. longae, adpresse stellato-puberulae, virides, persistentes, erectae; folia petiolata crasse membranacea, petiolo gracili 2.5-4.5 cm. longo stellato-puberulo; lamina oblanceolato-oblonga, 13-17 cm. longa, 3.5-5 cm. lata, breviter acuminata, basin versus longe sensimque angustata, basi ipsa anguste rotundata, supra viridis, glabra, nervis non elevatis, subtus pallidior, sparse minuteque praesertim ad nervos stellato-hispidula vel fere glabra, integra vel obsolete remoteque serrulata, pilis brevibus rigidis adpressis hispidulo-ciliata, costa gracili elevata, nervis lateralibus utroque latere c. 10, angulo lato adscendentibus, arcuatis, remote a margine conjunctis; inflorescentiae umbellato-cymosae foliis longiores, longe

pedunculatae, pedunculo gracili usque ad 20 cm. longo, dichotomo, floribus paucis longissime pedicellatis, pedicellis interdum 7.5 cm. longis, minute stellato-pubescentibus; bracteae involucrales c. 10, alte connatae, c. 8 mm. longae, lineares, attenuatae, virides, stellato-puberulae; calyx bracteis aequilongus, lobis triangularibus acutis vel acuminatis extus sparse minuteque stellato-puberulis; fructus 12 mm. latus depressus, carpellis 5 apice rotundatis glabris, obscure venosis, dorso costatis, dorso et lateribus aristis 3 c. 5 mm. longis spiniformibus retrorso-barbatis armatis.—Mexico: Moist shady forest, "rare," Zacuapam, Veracruz, April, 1927, *C. A. Purpus 11118* (Herb. Field Mus. No. 588,336, type).

Among the related species with spine-armed carpels, this plant is distinguished by its entire leaves.

STERCULIACEAE

Ayenia fasciculata Millsp., sp. nov. *A. ovata* Millsp. Field Mus. Bot. 1: 310. 1896, non Hemsl. 1878.—Frutex gracilis c. 2 m. altus, caule stricto rare ramoso tereti pubescente vel glabrato, ramulis brevibus alternis 1-9 mm. longis; folia subfasciculata, petiolo 2-7 mm. longo pubescente; lamina oblonga, 1-3 cm. longa, 0.5-1.5 cm. lata, acuta, biserrata, primo sparse pubescens, serius glabrata; stipulae erectae, spinulosae, rubro-brunneae, 3-4 mm. longae; flores in cymas axillares 1-3-floras solitarias dispositi; petala 5 unguiculata, lamina lata auriculata, auriculis truncatis, dorso eglandulosa; sepala 5 ovata 2-3 mm. longa acuta viridia reflexa, sub fructu persistentia; antherae 3-loculares; gynophorum in anthesi 1-1.5 mm. longum, in fructu 3-4 mm. longum; capsula echinata.—Yucatan: Buena Vista Xbac, August, 1896, *G. F. Gaumer 1120* (Herb. Field Mus., type; duplicates in herb. Mo. Bot. Gard. and U. S. Nat. Herb.). Chichankanab, *Gaumer 2184* (Herb. Field Mus., herb. Mo. Bot. Gard., U. S. Nat. Herb.). Silam, *Gaumer 666* (Herb. Field Mus., herb. Mo. Bot. Gard., Gray Herb.). Near Piste, *Seler 3980* (Herb. Field Mus.).

The foreshortening of the lateral branches bearing the inflorescences and leaves gives them a fascicled appearance, but close examination shows that the leaves are alternate.[1]

DILLENIACEAE

Tetracera mollis, sp. nov.—Ramuli teretes densissime stellato-pubescentes, pilis longioribus patentibus intermixtis; folia coriacea petiolata, petiolo crasso 1.5-2 cm. longo dense stellato-piloso et pilis longioribus piloso; lamina late oblonga vel elliptico-oblonga, 9-13.5 cm. longa, 4-7 cm. lata, apice rotundata et interdum apiculata, basi obtusa vel rotundata, interdum abrupte breviterque decurrens, versus apicem remote obscureque serrulata vel repanda, supra scaberrima, costa nervisque impressis, subtus fere concolor, ubique

[1]The description of this species is published here through the courtesy of Miss Lawrence, of the Missouri Botanical Garden, who is monographing the genus *Ayenia*.—P. C. S.

densissime molliterque stellato-pilosula, ad nervos pilis longioribus simplicibus pallidis patentibus mollibus pilosa, costa nervisque elevatis, nervis lateralibus utroque latere c. 13, angulo lato adscendentibus, arcuatis, gracilibus, percurrentibus; flores in paniculam paucifloram c. 9 cm. longam dispositi, breviter pedicellati et 3 mm. longe stipitati, bracteis parvis foliaceis, ramis dense velutino-pilosulis; sepala obovata, 7-9 mm. longa, obtusa, utrinque dense sericea; carpella 3 acuminata lucida 1 cm. longa, sparse adpresso-pilosa; semina solitaria, basi arillo profunde laciniato cincta.—British Honduras: Honey Camp, Orange Walk, October, 1928, *C. L. Lundell 47* (Herb. Field Mus. No. 580,854, type).

In the other species of *Tetracera* known from Central America the pubescence of the lower surface of the leaves is rough and harsh, and quite unlike the soft velvety covering of *T. mollis*.

QUIINACEAE

Quiina Schippii, sp. nov.—Arbor 6-7.5 m. alta, trunco 7.5-10 cm. diam., ramulis gracilibus teretibus, vetustioribus griseis plus minusve rimosis et striatis, novellis pilis plerumque patentibus fulvis hirtellis, internodiis elongatis; stipulae 7-15 mm. longae, lineares vel lineari-subulatae, erectae, persistentes, attenuatae, virides, glabrae, erectae; folia opposita vel ternata breviter petiolata, petiolo crasso 3-5 mm. longo fulvo-hirtello; lamina subcoriacea, oblongo-lanceolata, 8-20 cm. longa, 2-7 cm. lata, longe angusteque acuminata, acumine apice obtuso, basin versus longe sensimque attenuata, utrinque glabra vel tantum ad costam prope basin hirtella, supra viridis, lucida, costa nervisque prominulis, subtus paullo pallidior, costa gracili elevata, nervis lateralibus utroque latere c. 9, prominentibus, valde adscendentibus, arcuatis, gracilibus, marginem fere attingentibus, inter nervos creberrime pulchreque lineolata; racemi solitarii vel fasciculati 1-4.5 cm. longi simplices, pauci- vel multiflori, bracteis ovatis acutis ciliatis, rhachi dense hirtella, pedicellis 1.5-3 mm. longis validis glabris; sepala 4 ovalia vel rotundata, 1.5-1.8 mm. longa, apice rotundata, ciliata; petala 4 rotundata 2.5 mm. longa, apice rotundata, glabra, alba, ciliolata; stamina petalis breviora, filamentis gracilibus glabris, antheris globosis c. 0.5 mm. longis; bacca oblonga glabra 8 mm. longa, apice obtusa vel subtruncata, stylis 2 persistentibus coronata.—British Honduras: In jungle, Middlesex, alt. 60 m., July 13, 1929, *W. A. Schipp 238* (Herb. Field Mus. No. 598,219, type). Mullins River road, in jungle, alt. 30 m., June 20, 1929, *Schipp 231*.

The only other known Central American representative of this family is *Q. panamensis* Standl., of Panama, in which the pubescence is closely appressed, the petioles much longer, and the leaves abruptly caudate-acuminate.

PASSIFLORACEAE

Passiflora yucatanensis Killip, sp. nov.—Herba scandens 2.5-4.5 m. longa, caulibus 4-5-angulatis striatis puberulis; stipulae

falcato-subulatae, 2-3 mm. longae, 0.5 mm. latae; petioli 1-1.5 cm. longi puberuli eglandulosi; lamina 4-5 cm. longa, 6-8 cm. lata, apice biloba vel obscure triloba (lobis lateralibus rotundatis, lobo mediano truncato vel acutiusculo), basi rotundata vel truncata, subtus paribus 3-5 ocellorum onusta, membranacea vel subcoriacea, supra glabra, subtus praesertim ad margines puberula; bracteae setaceae 2 mm. longae c. 5 mm. infra calycem insertae; flos 3-3.5 cm. latus; sepala oblongo-lanceolata, 1.3-1.6 cm. longa, 0.4 cm. lata, obtusa; petala oblongo-lanceolata, 8-9 mm. longa, 4 mm. lata, obtusa; coronae filamenta biseriata, exterioribus 4-5 mm. longis erectis 3-angulatis, medio paullo dilatatis, interioribus capillaribus 2 mm. longis; operculum membranaceum, arcte plicatum, margine minute fimbrillato incurvo; gynophorum gracile 1-1.2 cm. longum striatum glabrum; antherae lineari-oblongae 4 mm. longae, 0.9 mm. latae; ovarium anguste ovoideum dense albo-villosum; styli 5 mm. longi clavati.—Yucatan: Cozumel Island, in 1885, *G. F. Gaumer 101* (Gray Herb., type; duplicate in herb. Kew.).

This collection has been reported as "*Passiflora Andersonii* DC.?," a species of the islands of St. Lucia and Dominica, related to *P. rotundifolia* and quite distinct from *P. yucatanensis*.

The foliage of this species suggests that of some of the forms of *P. biflora*, but the Yucatan plant differs from that species by its relatively shorter and erect outer corona filaments, its elongate slender gynophore, and its longer peduncles.

BEGONIACEAE

Begonia Calderonii, sp. nov.—Herba brevicaulis, caule ut videtur adscendente vel prostrato, dense pilis gracillimis villoso; stipulae ovatae subscariosae c. 1 cm. longae, longe subulato-acuminatae, ferrugineae, sparse villosae vel glabratae; folia longissime petiolata, petiolo gracillimo 10 cm. longo et ultra, sparse pilis longis ferrugineis gracillimis villoso; lamina 1.5-2.5 supra basin peltata, late ovata vel rotundato-ovata, 7-10 cm. longa et 5-6 cm. lata, subabrupte longiacuminata, basi late rotundata, interdum brevissime supra medium triloba, remote obscureque repando-denticulata vel subintegra, supra viridis, glabra, subtus ad nervos sparse longipilosa; cymae folia aequantes vel eis longiores, dichotomae, c. 6 cm. longae, paucifloraе, floribus fertilibus in statu fructifero c. 2 cm. longe pedicellatis, pedicellis gracillimis glabris vel hinc inde longe villosis; capsula lanceolato-oblonga 10-12 mm. longa, 5 mm. lata, superne attenuata, angulo uno in alam 1.5 cm. longam tenuem obtusam venosam sursum paullo curvatam producto.—Salvador: Cerro de Apaneca, in 1928, *Salvador Calderón 2416* (Herb. Field Mus. No. 580,408, type).

The available material is rather fragmentary, and in fruit only, but it represents a well-marked species which I have been unable to find described.

LYTHRACEAE

Heimia salicifolia (HBK.) Link.—This member of the family Lythraceae is of occasional occurrence over a large area of tropical America. It receives another addition to its synonymy in a name which was attributed to another family by its author: *Ludwigia tepicana* Jones, Contr. West. Bot. 15: 131. 1929.

RHIZOPHORACEAE

Cassipourea podantha Standl. Field Mus. Bot. 4: 241. 1929.

The range of this species, which was described from Panama, is extended widely by the following collections recently studied: British Honduras: Honey Camp, September, 1929, *C. L. Lundell 427*. Middlesex, alt. 60 m., in jungle, a tree of 9 m., the trunk 12.5 cm. in diameter, September, 1929, *W. A. Schipp 322*.

MYRTACEAE

Eugenia yucatanensis, sp. nov.—Frutex, ramulis vetustioribus subteretibus griseis, novellis subcompressis dense albido-strigillosis, internodiis 1.5-3.5 cm. longis; petioli validi 5-7 mm. longi supra anguste sulcati minute strigillosi; lamina elliptica, 5.5-8 cm. longa, 2.5-3.5 cm. lata, abrupte acuminata, acumine lato 1 cm. longo apice rotundato, basi rotundata vel obtusissima, subcoriacea, supra opaca, glabra vel glabrata, costa impressa, concolor, subtus ad costam elevatam minute strigillosa, aliter glabrata, nervis lateralibus utroque latere c. 10, gracillimis, inconspicuis, angulo lato divergentibus, fere rectis, in nervum collectivum 2 mm. a margine distantem conjunctis, margine subrevoluto, lamina opaca sed dense glanduloso-puncticulata; flores in racemos breves solitarios axillares sessiles vel breviter pedunculatos 2-2.5 cm. longos c. 8-floros dispositi; bracteae ovato-triangulares c. 1 mm. longae; pedicelli 3-5 mm. longi divaricati dense albido-strigillosi; ovarium dense albido-strigillosum; sepala 4 rotundata 2.5 mm. longa puberula, in anthesi patentia; petala ovalia vel suborbicularia 4 mm. longa apice rotundata dense glanduloso-punctata glabra ciliata.—Yucatan: Izamal, in 1888, *G. F. Gaumer* (Herb. Field Mus. No. 181,609, type).

Related to *E. Purpusii* Standl., of Oaxaca, which differs in its obtuse leaves and larger flowers.

Eugenia Gaumeri, sp. nov.—Ramuli vetustiores validi teretes ochracei, novellis dense albido-strigosis dense foliatis, internodiis plerumque 1.2-2.5 cm. longis; petioli validi 2-3 mm. longi puberuli vel glabrati; lamina oblonga, lanceolato-oblonga vel elliptico-oblonga, medio vel infra medium latissima, 4-5.5 cm. longa, 1.3-1.8 cm. lata, versus apicem obtusum angustata, apice supremo vulgo rotundato, versus basin acutam cuneatim angustata, subcoriacea, supra intense

viridis, primo praesertim ad costam sparse strigosa, cito glabrata, sublucida, costa impressa, subtus pallidior, primo albido-strigosa sed mox glabrata, costa gracili elevata, nervis lateralibus utroque latere c. 7, inconspicuis, gracillimis, angulo acuto adscendentibus, fere rectis, prope marginem in nervum collectivum distinctum conjunctis, marginibus subrevolutis, lamina glandulis parvis dense pellucido-punctata; flores plerumque ad axillas 3-6-fasciculati, interdum breviter racemosi, rhachi usque ad 3 mm. longa, pedicellis gracilibus 6-15 mm. longis dense albido-strigillosis; alabastra vix 3 mm. diam.; ovarium dense albo-strigillosum; calycis lobi 4 ovales vel suborbiculares, 2 mm. longi, apice rotundati, glanduloso-punctati, strigillosi, patentes vel post anthesin reflexi; petala rotundata sepalis fere duplo longiora, dense glandulis parvis brunneis punctata, extus sparse puberula.—Yucatan: Kancabtsonot, May, 1917, *G. F. Gaumer 23843* (Herb. Field Mus. No. 466,294, type). Without definite locality, *Gaumer 23984, 24073.*

Related to *E. avicenniae* Standl., of Guerrero, which differs in its elongate inflorescence.

Calyptranthes Karlingii, sp. nov.—Ramuli acute tetragoni crassiusculi glabri, internodiis 1.5-2 cm. longis; folia breviter petiolata, petiolo crasso 3-6 mm. longo supra sulcato; lamina crasse coriacea, lanceolato-oblonga, 5-9 cm. longa, 2-3.5 cm. lata, sensim acuminata, acumine obtuso, basin versus paullo angustata, basi ipsa lata et late rotundata vel fere truncata, glabra, concolor, utrinque densissime glanduloso-puncticulata, costa supra subimpressa, subtus elevata, crassiuscula, nervis lateralibus subtus obscuris, numerosis, rectis, prope marginem nervum collectivum obscurum efformantibus, margine revoluto; inflorescentia cymoso-paniculata axillaris dense multiflora, 2-3.5 cm. longa et lata, ramis paucis divaricatis compressis crassis glabris vel sparsissime puberulis, pedunculo acute tetragono c. 3.5 cm. longo, glabro, floribus dense aggregatis sessilibus vel brevissime pedicellatis; calyx circumscisse dehiscens, parte persistente turbinato-campanulata 2-2.5 mm. longa basi acutiuscula sparse puberula vel fere glabra, calyce in alabastro apice mucronato; petala rotundato-obovata c. 2 mm. longa apice rotundata glabra; stamina numerosissima 3-4 mm. longa, filamentis filiformibus glabris.—British Honduras: Tower Hill Estate, in 1927, *J. S. Karling 39* (Herb. Field Mus. No. 599,824, type).

C. Millspaughii Urban, which also occurs in British Honduras, differs in having oblong-elliptic leaves which are acute at the base, and in its terete branchlets.

MELASTOMACEAE

Miconia Schippii, sp. nov.—Frutex 2-metralis, trunco 2.5 cm. diam., ramulis gracilibus obtuse quadrangularibus viridibus, novellis hince inde setuloso-hispidis, internodiis elongatis, inferioribus glabris; folia petiolata crasse membranacea, petiolo gracili

1.5-3.5 cm. longo hispido; lamina lanceolato-oblonga, 11-17 cm. longa, 4-6.5 cm. lata, longiacuminata, basi rotundata vel obtusa, quinquenervia, nervis exterioribus multo gracilioribus, supra viridis, undique sparse pilis longis rigidis lutescentibus hispida, subtus paullo pallidior, tantum ad nervos pilis rigidis brevibus elongatisve patentibus vel adpressis hispida, costa nervisque gracilibus prominentibus, nervulis transversis prominulis; panicula 2.5 cm. longe pedunculata anguste thyrsiformis, 7 cm. longa, 3 cm. lata, ramis ferrugineo-hispidis adscendentibus brevibus, floribus aggregatis sessilibus; hypanthium 1.5 mm. longum subglobosum glabrum; calyx c. 0.7 mm. longus breviter lobatus, lobis latissime triangularibus obtusiusculis apice pilis 3-4 brevibus onustis; petala alba late oblonga 2.5-3 mm. longa glabra apice retusa erecta.—British Honduras: Big Creek, edge of forest, alt. 30 m., June 11, 1929, *W. A. Schipp 220* (Herb. Field Mus. No. 598,221, type).

"Occasional. Leaves flushed with dark red on the lower surface."

Miconia belizensis, sp. nov.—Arbor 6-metralis, trunco 10 cm. diam., ramulis novellis crassiusculis ferrugineis densissime minuteque adpresso-furfuraceis; folia petiolata, crasse membranacea, petiolo gracili 2.5-4.5 cm. longo subtereti minute et densissime ferrugineo-furfuraceo; lamina elliptico-oblonga vel ovato-oblonga, 12-22 cm. longa, 4.5-10.5 cm. lata, versus apicem angustata et abrupte longiacuminata, acumine angusto attenuato, basi obtusa vel anguste rotundata et 5-nervia, arcte repando-dentata, dentibus 1-1.5 mm. longis obtusis, supra viridis, glabra, nervis non elevatis, subtus pallide brunnescens, ubique minutissime stellato-tomentella, costa nervisque gracilibus elevatis, nervulis transversis crebris prominulis rectis angulo lato divergentibus parallelis; panicula terminalis 1.5 cm. longe pedunculata, c. 5 cm. longa, dense multiflora, ramulis crassis rigidis dense tomento ferrugineo adpresso stellato-tomentellis, floribus sessilibus vel brevissime crasseque pedicellatis; bacca immatura subglobosa 6 mm. longa dense pilis minutissimis stellatis granuloso-tomentella, basi late rotundata, calyce persistente 1-1.5 mm. longo coronata, calycis dentibus brevissimis late rotundatis.—British Honduras: Middlesex, in jungle, alt. 60 m., September 27, 1929, *W. A. Schipp 395* (Herb. Field Mus. No. 602,934, type).

The collector's notes state that the flowers are white, with purple stamens, but no flowers are present on the specimen at hand. Because of the absence of flowers it is impossible to determine accurately the position of this species within the genus, but it differs essentially from all the species of which I have examined material.

Maieta cuneata, sp. nov.—Frutex 3-metralis, trunco 10 cm. diam., ramis crassis teretibus viridibus vel olivaceis, dense pilis rigidis divaricatis basi paullo incrassatis hispidis, internodiis elongatis; folia opposita longiuscule petiolata, petiolo crasso 1-1.5 cm. longo dense hispido apice vesiculifero, vesiculo parvo c. 1 cm.

longo pro maxima parte laminae basi circumdato, dense hispido; lamina obovata, 8.5-14.5 cm. longa, 4-6.5 cm. lata, apice acuta et abrupte caudata, cauda lineari 5-10 mm. longa, basin versus longe cuneato-attenuata, firme membranacea, integra, utrinque pilis longis rigidis patentibus densissime hispida, 5-plinervia; flores in axillis et ad nodos defoliatos dense fasciculati, sessiles vel breviter pedicellati, 5-meri; calyx 2.5 mm. longus subglobosus dense hispidus, dentibus brevissimis; petala alba lanceolato-ovata 2 mm. longa, versus apicem obtusiusculum longe attenuata, glabra; antherae oblongae obtusae fere 2 mm. longae.—British Honduras: Middlesex, in dense forest along mountain stream, alt. 75 m., September 1, 1929, *W. A. Schipp 320* (Herb. Field Mus. No. 603,048, type).

The collector states that the fruits are orange-colored, but none are present on the specimens. The species is a well-marked one, easily recognized by the shape of the leaves and by their abrupt tail-like tips.

Henriettella macrocalyx, sp. nov.—Arbor 7.5 m. alta, trunco 10 cm. diam., ramulis vetustioribus crassis brunnescentibus minute rimosis, novellis obtuse tetragonis ferrugineis pilis arcte adpressis incrassatis dense strigosis, internodiis c. 2 cm. longis; folia breviter petiolata, petiolo c. 1 cm. longo dense hispido-strigoso; lamina coriacea, integra, oblongo-obovata, 10-15.5 cm. longa, 4.5-6.5 cm. lata, apice acuta et abrupte breviterque cuspidato-acuminata, acumine angusto 5-7 mm. longo attenuato, basin versus cuneato-angustata, supra luteo-viridis, praesertim ad nervos hispidulo-strigosa, subtus pallida, ubique minute stellato-tomentosa, pilis brevibus rigidis basi stellato-radiatis intermixtis, ad costam nervosque hispidulo-strigosa, triplinervia, nervis subtus elevatis, gracilibus, nervulis transversis numerosis prominentibus crebris parallelis angulo fere recto abeuntibus, margine saepe revoluto; flores pauci ad nodos defoliatos fasciculati, pedicellis crassis 3-4 mm. longis dense ferrugineo-strigosis; calyx in anthesi 1 cm. longus oblongo-campanulatus, extus densissime pilis brevibus incrassatis arcte adpressis strigosus, lobis 5 ovato-triangularibus 4-5 mm. longis subulato-acuminatis.—British Honduras: Stann Creek Railway, in swampy jungle, near sea level, September 6, 1929, *W. A. Schipp 388* (Herb. Field Mus. No. 603,049, type).

The collector reports that the petals are white, but none are present on the specimens I have examined. The species is noteworthy in the genus for its very large flowers.

MYRSINACEAE

Parathesis Storkii, sp. nov.—Arbor parva, ramulis crassiusculis glabris, internodiis brevibus, vetustioribus subteretibus ochraceis rimosis; folia petiolata rigide membranacea, elliptica vel oblongo-elliptica, 5-8 cm. longa, 2-4 cm. lata, acuta vel breviter acuminata, basi acuta, integra, glabra, supra viridia, densissime

punctis minutis fuscis conspersa, nervis prominulis, subtus paullo pallidiora, nigro-puncticulata et plus minusve lineolata, costa gracili elevata, nervis lateralibus utroque latere c. 10, angulo lato divergentibus, gracillimis, prominulis, juxta marginem conjunctis, nervulis paucis obscuris reticulatis, margine revoluto; inflorescentiae axillares bipinnatim paniculatae, longe pedunculatae, laxe multiflorae, c. 7 cm. longae et 8 cm. latae, pedunculo gracili c. 4 cm. longo, floribus umbellatis, umbellis 2-7-floris, pedicellis gracilibus 3-8 mm. longis glabris, bracteis lanceolato-linearibus 1-1.5 mm. longis; calyx 1.5-2 mm. longus, sepalis breviter connatis triangulari-ovatis acutis minutissime puberulis; corolla in alabastro 5 mm. longa, ovata, acuta vel acuminata, minute lepidoto-puberula, petalis breviter connatis lanceolatis attenuatis intus villosulo-puberulis; stamina petalis multo breviora, antheris lanceolato-oblongis acuminatis 2 mm. longis dorso nigris, filamentis crassis 1-1.5 mm. longis; stylus gracilis c. 6 mm. longus, prope basin ut ovarium breviter pilosulus; fructus ruber globosus 5-6 mm. latus, densissime nigro-punctatus.—Costa Rica: San Cristóbal Road, alt. 1,800 m., June 14, 1928, *H. E. Stork 2560* (Herb. Field Mus. No. 589,145, type).

Apparently a relative of the Guatemalan *P. pleurobotryosa* Donn. Smith, in which the branches are densely ferruginous-villous.

OLEACEAE

Linociera panamensis, sp. nov.—Arbor 12-15-metralis, trunco 30-38 cm. diam., omnino glabra, ramulis gracilibus griseis vel ochraceis, lenticellis paucis pallidis elevatis conspersis, internodiis brevibus; folia opposita petiolata subcoriacea, petiolo gracili 1-1.5 cm. longo supra late sulcato; lamina obovato-oblonga, elliptico-oblonga vel oblanceolato-oblonga, 10-16.5 cm. longa, 4-5.5 cm. lata, abrupte acuminata, acumine angusto obtuso, basi acuta vel acuminata, interdum abrupte contracta et longe decurrens, supra viridis, costa impressa, nervis non elevatis, subtus fere concolor, costa gracili elevata, nervis lateralibus utroque latere c. 10, gracilibus, prominulis, angulo lato adscendentibus, irregularibus, prope marginem conjunctis, nervulis obsoletis; inflorescentiae axillares et terminales cymoso-paniculatae, foliis plerumque breviores, ramis rigidis brevibus patentibus, pedicellis rectis rigidis 4-9 mm. longis, bracteis linearibus vel subulatis 2-3 mm. longis; calyx persistens, laciniis 4 c. 1 mm. longis triangularibus obtusis patentibus; drupa alba compressa oblongo-elliptica 2 cm. longa, 1 cm. lata, acuta, basi acutiuscula, utrinque costata.—Panama: Flat Rock, region of Almirante, Province of Bocas del Toro, in 1928, *G. P. Cooper 553; Yale No. 12186* (Herb. Field Mus. No. 579,733, type).

"A tree with fluted trunk and no buttresses. Said to become very large. The burning wood is reported to have the odor of roses, and the flowers are stated to have the same odor."

The only other *Linociera* known from Central America is *L. oblanceolata* Robinson, of British Honduras, which has narrow leaves, pubescent branchlets, and terete fruit. That species, known heretofore only from the type, has been collected recently in British Honduras: Crique Negra, March 27, 1929. *N. S. Stevenson 106* (Yale No. 14890). It is reported to be a small tree, and the vernacular name is given as "wild cocoplum."

EBENACEAE

Diospyros cuneata, sp. nov.—Ramuli teretes, grisei vel brunnescentes, rimosi, novellis sparse strigillosis mox glabratis, dense foliatis; petioli 2-3 mm. longi strigillosi vel glabrati; lamina plerumque cuneato-obovata vel anguste obovata, 4-8.5 cm. longa, 1.5-3.5 cm. lata, apice obtusa vel rotundata, basin acutam versus cuneatim angustata, supra viridis, lucida, ad costam minute puberula vel glabrata, subtus paullo pallidior, statu juvenili sparsissime strigillosa sed cito glabrata, venis utrinque prominulis, nervis lateralibus utroque latere c. 5, gracilibus, angulo acutissimo adscendentibus, nervulis laxe et irregulariter reticulatis, margine plerumque plus minusve revoluto; flores masculi in cymas axillares plerumque 3-4-floras 2-4 mm. longe pedunculatas dispositi, pedicellis validis usque ad 2 mm. longis dense strigillosis; calyx campanulatus 3.5 mm. longus dense sericeo-strigillosus breviter 4-lobus, lobis late triangularibus vel rotundatis tubo plus quam duplo brevioribus; corolla hypocrateriformis extus dense sericea 6-7 mm. longa, lobis 4 tubo brevioribus; antherae 2.5 mm. longae; calyx fructifer 13-15 mm. latus 4-6-lobus, lobis apice late rotundatis, extus sparse strigillosis, intus dense sericeis; bacca (tantum imperfecta visa) glabra.—Yucatan: Without definite locality, in 1917-21, *G. F. Gaumer 24098* (Herb. Field Mus. No. 552,101, type). Izamal, *Gaumer 700.* Without definite locality, *Gaumer 24211, 23955.*

This clearly marked species is not closely related to any of the other Mexican species of *Diospyros.*

APOCYNACEAE

Plumeria multiflora, sp. nov.—Ramuli teretes c. 13 mm. crassi prope apices dense foliati, inferne cicatricibus magnis foliorum delapsorum conspersi, glabri; petioli graciles 2 mm. crassi minute puberuli vel glabrati, 2-2.5 cm. longi; lamina anguste oblongo-cuneata, 6-9.5 cm. longa, 2-3 cm. lata, apice late rotundata et apiculata, versus petiolum sensim longiattenuata, rigide coriacea, supra obscure viridis et lucida, glabra, costa profunde impressa, subtus pallidior, dense pilis brevibus intertextis tomentosa, costa crassa glabra, nervis lateralibus utroque latere c. 18, arcuato-divaricatis, nervulis arcte reticulatis, marginibus revolutis; inflorescentia prope apicem rami lateralis, glabra, dense multiflora, cymis

numerosis in umbellam terminalem dispositis, pedunculo valido 9-13 cm. longo; bracteae vix 1 mm. excedentes sed multo latiores, deciduae; pedicelli 5-9 mm. longi; calyx 1.5 mm. longus, lobis rotundatis apiculatis; corolla c. 4 cm. longa, fauce 4 mm. lata, lobis angustis tubum aequantibus.—Yucatan: Kancabtsonot, May, 1917, *G. F. Gaumer 23880* (Herb. Field Mus. No. 466,358, type).—British Honduras: Honey Camp, Orange Walk, in 1928, *C. L. Lundell LP10*.

This is not closely related to any of the five Plumerias hitherto reported from Mexico.

Tabernaemontana Schippii, sp. nov.—Arbor 15-metralis, trunco 20 cm. diam., omnino glabra, ramulis crassiusculis subteretibus brunnescentibus, in sicco plus minusve striatis, internodiis 1.5-4 cm. longis; folia opposita subcoriacea breviter petiolata, petiolo 5-15 mm. longo gracili supra late sulcato; lamina anguste lanceolato-oblonga, 8-18 cm. longa, 2.5-5 cm. lata, longe acuminata, acumine angusto obtuso, basin versus acute attenuata, supra lucida, in sicco fusca, nervis subimpressis, subtus pallidior, costa gracili elevata, nervis lateralibus utroque latere c. 13, angulo lato adscendentibus, arcuatis, gracilibus, prominulis, juxta marginem conjunctis, nervulis obsoletis, margine revoluto; inflorescentiae cymoso-paniculatae terminales subdense multiflorae, sessiles vel subsessiles, multo ramosae, ramis gracilibus, bracteis ovatis c. 1 mm. longis acutis persistentibus, pedicellis gracilibus plerumque 8-10 mm. longis; calyx profunde 5-lobus, laciniis ovatis 2 mm. longis obtusis subpatentibus; corolla alba, tubo 8 mm. longo basi ampliato, lobis late obovatis c. 7 mm. longis; antherae anguste oblongae 2 mm. longae inclusae.—British Honduras: In jungle, Big Creek, alt. 15 m., April 20, 1929, *W. A. Schipp 168* (Herb. Field Mus. No. 593,107, type).

Called "cojotón." "Beautiful in blossom, the flowers sweet-scented. Wood white and soft, full of latex."

The species is marked by the long and narrow, long-acuminate leaves, which are very lustrous on the upper surface.

Aspidosperma Woronovii, sp. nov.—Ramuli subteretes graciles cinerei vel ochracei rimosi, lenticellis elevatis pallidis conspersi, internodiis brevibus vel elongatis, novellis dense fulvo-puberulis; folia alterna breviter petiolata, petiolo 3-5 mm. longo densissime pilosulo; lamina oblonga vel elliptica, 4.5-6 cm. longa, 2-3.5 cm. lata, apice rotundata, basi obtusa vel rarius acutiuscula, subcoriacea, supra viridis, lucida, primo fulvo-tomentulosa, serius puberula vel glabrata, costa nervisque prominulis, nervulis manifestis prominulis reticulatis, subtus pallida, glauca, primo dense fulvo-tomentosa, glabrescens, costa gracili elevata, nervis lateralibus utroque latere c. 10, angulo acuto adscendentibus, prominulis, fere rectis, juxta marginem arcuato-conjunctis; inflorescentiae solitariae

oppositifoliae graciliter 3-15 mm. longe pedunculatae cymosae, floribus in capitula pauca dense multiflora 5-7 mm. lata sessilia vel breviter pedunculata dispositis, ramis dense fulvo-pilosulis, bracteis minutis lanceolato-subulatis; calyx 2.5 mm. longus puberulus, lobis 5 ovato-ellipticis tubo subaequalibus obtusis; corolla in alabastro 3 mm. longa extus glabra, tubo intus sparse pilosulo, lobis 5 ovatis obtusis tubo fere duplo brevioribus.—Colombia: Quebrada de Mambucá, Dept. Huila, August 29, 1926, *G. Woronow 7075* (Leningrad herbarium, type).

Apparently the only other member of the genus described from Colombia is *A. ellipticum* Rusby, which has practically glabrous leaves on longer petioles.

Echites yucatanensis Millsp., sp. nov.—Frutex gracilis scandens omnino glaber, caulibus teretibus, internodiis elongatis; glandulae numerosae parvae conicae interpetiolares ad basin petioli insertae, petiolo 6-15 mm. longo; lamina valde variabilis, vulgo late ovata, ovato-elliptica vel elliptico-oblonga, 6-10 cm. longa, 2.5-5 cm. lata, sensim vel subabrupte acuminata vel longiacuminata, basi rotundata et abrupte decurrens, interdum panduriformis, infra medium breviter vel profunde constricta vel breviter triloba, lobis basalibus late rotundatis vel rare acutis, supra lucida, subtus opaca et plus minusve pallidior, venis utrinque prominenti-reticulatis; flores cymosi, cymis axillaribus umbelliformibus, densis, c. 6-floris, pedunculo valido c. 2 cm. longo, pedicellis validis 5-9 mm. longis; bracteae lineari-subulatae 1.5-2.5 mm. longae; calycis lobi 3.5-4 mm. longi lanceolati longiattenuati, plerumque obscure ciliolati vel denticulati; corolla 5-5.5 cm. longa, tubo gracillimo (2 mm. crasso) 1.5 cm. longo, parte superiore abrupte dilatata (6 mm. crassa) et 1.5 cm. longa, supra sensim contracta et 2.5 mm. lata, postea in faucem brevem infundibuliformem expansa, limbo 3.5-4 cm. lato; antherae 8 mm. longae versus apicem longiattenuatae; folliculi 19-21 cm. longi, 4 mm. crassi.—Yucatan: Chichankanab, *G. F. Gaumer 1979* (Herb. Field Mus. No. 58,777, type). Tical, *Gaumer 23816*. Without definite locality, *Gaumer 1979, 24039*.

The nearest relative of this plant is *E. umbellata* Jacq., in which the leaves are usually rounded at the apex, dull, and not conspicuously reticulate, nor are they ever panduriform, so far as the ample herbarium material shows.

Echites pinguifolia, sp. nov.—Frutex scandens, caulibus gracilibus teretibus, vetustioribus brunnescentibus, novellis sparse puberulis vel hispidulis, internodiis elongatis; folia petiolata, petiolo 10-15 mm. longo gracili sparse puberulo; lamina crasse membranacea, ovata vel ovato-elliptica, 5-8 cm. longa, 2.5-4.5 cm. lata, abrupte cuspidato-acuminata, acumine 5-10 mm. longo angusto attenuato acuto, basi late rotundata et interdum abrupte

breviterque decurrens, integra, supra asperula, sparse puberula, costa prominula, subtus paullo pallidior, mollis, ubique dense minuteque velutino-pilosula, costa gracili elevata, nervis lateralibus utroque latere c. 6, angulo acuto adscendentibus, inaequalibus, remote a margine arcuato-conjunctis; racemi axillares crasse 1.5-2 cm. longe pedunculati, dense multiflori, rhachi crassa minute pilosula, bracteis brevibus subulatis deciduis, pedicellis plerumque 6-8 mm. longis crassiusculis sparse puberulis vel fere glabris; calyx extus glaber 3-3.5 mm. longus profunde 5-fidus, laciniis lanceolato-attenuatis erectis; corolla extus glabra, tubo gracillimo 18 mm. longo 1.5 mm. crasso, fauce obconica 1.5 cm. longa ore 12 mm. lata, lobis latis obtusis c. 1 cm. longis, corolla in alabastro acutiuscula.—Yucatan: Without locality, *G. F. Gaumer 815* (Herb. Field Mus. No. 36,618, type).

The type specimen has been determined as *E. pandurata* A. DC., a Mexican species, which is described as having obtuse calyx lobes. *E. pinguifolia* is similar in general appearance to *E. umbellata* Jacq., but that is a glabrous plant with very thick leaves.

Echites cuspidifera Blake, Contr. Gray Herb. 52: 79. 1917.

The type was collected at Manatee Lagoon, British Honduras, *M. E. Peck 35*. Another collection may now be reported from the same country: Six mile pine ridge, in open forest, a vine 3 m. long, the stem 2.5 cm. thick, the corollas yellow, September, 1929, *W. A. Schipp 368*.

Mandevilla denticulata Blake, Contr. Gray Herb. 52: 81. 1917.

Type from New Haven, British Honduras, *M. E. Peck 696*. Another collection is now at hand: British Honduras: Middlesex, in secondary forest, alt. 60 m., a vine 6 m. long, the stem 3.5 cm. thick, the large flowers yellow, with reddish brown tube, September, 1929, *W. A. Schipp S.6*.

Forsteronia viridescens Blake, Contr. Gray Herb. 52: 80. 1917.

The type is *M. E. Peck 450* from Manatee Lagoon, British Honduras. The following collection is conspecific: British Honduras: Middlesex, in jungle, alt. 60 m., September, 1929, a vine 4.5 m. long, the stem 5 cm. thick, the small flowers white, *W. A. Schipp 360*.

ASCLEPIADACEAE

Vincetoxicum crassifolium, sp. nov.—Volubilis, caulibus validis subcompressis ad margines dense pilis rigidis patentibus lutescentibus 1 mm. longis pilosis, ad latera dense puberulis et

recurvo-hispidulis; petioli validi 6-14 mm. longi ut caules pubescentes; lamina ovato-ovalis, 4-6.5 cm. longa, 2.3-4 cm. lata, apice acutiuscula vel abrupte acuta, basi rotundata et subcordata vel breviter cordata, sinu vix 3 mm. longo fere clauso, coriacea, opaca, supra minute et subdense velutino-hirtella, subtus pilis brevibus fulvis dense velutino-pilosa; cymae axillares pauciflorae, pedunculo valido 3-6 mm. longo, pedicellis usque ad 11 mm. longis dense minuteque glanduloso-pilosis; calycis lobi lanceolato-ovati 3.5 mm. longi, acuminati vel acutiusculi, minute pubescentes et ciliolati; corolla viridescens 1 cm. longa, 1.5 cm. lata, extus dense puberula, intus glabra, conspicue reticulato-venosa, lobis rotundato-ovalibus tubo longioribus, apice late rotundatis; corona annuliformis brevissima, corollae adnata, in appendices 5 remotas carnosas anguste triangulares acutiusculas fere 2 mm. longas protracta.—Yucatan: Chichankanab, April, 1917, *G. F. Gaumer 23704* (Herb. Field Mus. No. 466,127, type). Kancabtsonot, *Gaumer 23884*.

Vincetoxicum Schippii, sp. nov.—Suffrutex(?) scandens, caulibus gracillimis puberulis vel scaberulis, internodiis elongatis; folia longe petiolata, membranacea, petiolo gracili c. 4.5 cm. longo fere glabro; lamina ovato-oblonga vel oblonga, 11.5-12.5 cm. longa, 5-5.5 cm. lata, acuminata, acumine obtusiusculo, basi profunde cordata, sinu fere 2 cm. longo rotundato, lobis basalibus late rotundatis, supra glabra, nervis prominulis, subtus paullo pallidior, sparse scaberula vel fere glabra, costa gracili elevata, nervis lateralibus utroque latere 5-6, prominentibus, remote a margine conjunctis; flores graciliter pedicellati, pedicellis c. 2.5 cm. longis sparse puberulis; sepala ovata 12-13 mm. longa, basi 6-8 mm. lata, versus apicem obtusiusculum sensim angustata, pallide viridia, glabra; corolla extus glabra viridis c. 3.5 cm. lata fere ad basin 5-loba, lobis oblongis c. 2 cm. longis anguste sensimque acuminatis, 4 mm. latis, intus glabris; corona 5 mm. lata, breviter annularis, minute multicrenulata, minute ciliolata.—British Honduras: Middlesex, in open places, alt. 60 m., September 15, 1929, *W. A. Schipp S.19* (Herb. Field Mus. No. 602,928, type).

The material upon which this description is based is very fragmentary, but the plant can not be referred satisfactorily to any of the species reported heretofore from Central America.

Dictyanthus yucatanensis, sp. nov.—Volubilis, caulibus gracilibus, vetustioribus ochraceis, novellis satis dense hirsutis, internodiis elongatis; folia membranacea longe petiolata, petiolo gracillimo 2-4.5 cm. longo breviter hirsuto; lamina late ovato-cordata, 3.5-7.5 cm. longa, 2.5-4.5 cm. lata, acuta vel acuminata, basi profunde cordata, sinu lato aperto 5-15 mm. longo rotundato, lobis basalibus rotundatis et paullo incurvis, supra viridis, sparse breviterque pilosa, subtus pallidior, praesertim ad nervos breviter pilosa; cymae umbelliformes pauciflorae 2-3 mm. tantum longe pedunculatae, pedicellis crassiusculis plerumque 3-4 mm. longis pilosulis

vel glabratis; sepala oblongo-lanceolata 6 mm. longa 2 mm. lata, pallida, acuminata, sparse minuteque pilosula vel glabrata, venulosa; corolla late campanulata c. 22 mm. lata et 12 mm. longa, extus sparse et minute pilosula, intus ubique arcte nigro-reticulata et glabra, lobis late triangularibus acuminatis; coronae squamae 4 mm. longae, anguste oblongae, apice dilatatae et rotundatae.—Yucatan: Without locality, *G. F. Gaumer 933* (Herb. Field Mus. No. 37,281, type). Progreso, *Gaumer 1173*. Buena Vista Xbac, *Gaumer 1173*. Chichankanab, *Gaumer 1544*.

The vernacular name is reported as "xbockin" and "boochin." The material has been referred to *D. ceratopetalus* Donn. Smith, a plant with much larger corollas. The flowers of *D. yucatanensis* are much like those of *D. parviflorus* Hemsl., but the latter is a low plant with short petioles and with much denser pubescence.

Dictyanthus brachistanthus, sp. nov.—Volubilis, ut videtur herbacea, caulibus gracilibus sparse puberulis viridibus, internodiis elongatis; folia longe petiolata, petiolo plerumque 2-2.5 cm. longo minute puberulo et sparse hirtello vel glabrato; lamina membranacea, ovata vel deltoideo-ovata, 3.5-8 cm. longa, 2-4 cm. lata, subabrupte acuminata, acumine attenuato acuto angusto, basi rotundata vel truncata, rarius subcordata, supra viridis, pilis brevibus patentibus pallidis pilosula et plus minusve scaberula, subtus pallida, dense hispidula et glanduloso-puberula; cymae umbelliformes dense pauciflorae 0.7-3 cm. longe pedunculatae, pedunculo minute puberulo, pedicellis validiusculis plerumque 3-7 mm. longis minute puberulis et hispidulis; sepala anguste lanceolata 6-7 mm. longa attenuata erecta minute puberula; corolla latissime campanulata, glabra, c. 12 mm. lata et 6 mm. longa, intus ubique minute venulis nigrescentibus reticulato-venulosa, lobis late triangularibus acuminatis; coronae squamae anguste obovatae 2 mm. longae apice rotundatae.—Guatemala: Atitlán, Dept. Sololá, alt. 600 m., February, 1894, *Heyde & Lux 6346* (Herb. Field Mus. No. 76,787, type).

The type collection was distributed as *D. parviflorus* Hemsl., but it represents a plant quite unlike that Mexican species. *D. brachistanthus* is related to *D. yucatanensis,* but in that the leaves are deeply cordate at the base, the stems are hirsute, and the appendages of the corona much more developed.

CONVOLVULACEAE

Maripa nicaraguensis Hemsl. Biol. Centr. Amer. Bot. 2: 382. 1882.

Although this species is rather common along some parts of the Atlantic coast of Central America, the following collection shows that its range extends much farther northward than had been

known previously: British Honduras: Middlesex, in jungle, alt. 60 m., August, 1929, *W. A. Schipp S.14.* The specimens are in fruit only.

Ipomoea Mitchellae, sp. nov.—Herba alte scandens, caulibus sparse pilis longis patentibus saepe deciduis hirsutis; folia longe petiolata membranacea, lamina ovata vel late ovata, 5.5-9.5 cm. longa, 3-7 cm. lata, integra, longe et interdum abrupte acuminata, basi profunde cordata, sinu lato 1-1.5 cm. longo, lobis basalibus late rotundatis, supra viridi, subtus paullo pallidiore et plus minusve albido-puncticulata, petiolis plerumque sparse hirsutis; flores cymosi, cymis 2.5-4.5 cm. longe pedunculatis, pedunculis glabris pauciflоris, pedicellis plerumque 6-10 mm. longis glabris, bracteis foliaceis linearibus vel lanceolatis, 0.6-2 cm. longis, attenuatis, glabris; sepala foliacea lanceolato-oblonga 12-20 mm. longa attenuato-acuminata et apice filiformi-producta, supra glabra, prope basin dense hirsuta; corolla infundibuliformis purpurea glabra, 7 cm. longa, tubo crasso fauce 1.5 cm. lato; capsula (immatura?) ovoidea obtusa 9 mm. longa glabra 3-locularis, seminibus dense pubescentibus 5 mm. longis.—Honduras: Wet thicket, La Fragua, Dept. Atlántida, alt. 20 m., December 7, 1927, *Paul C. Standley 52658* (Herb. Field Mus. No. 582,849, type). Near Progreso, Dept. Yoro, wet thicket, *Standley 54994.* Quebrada Seca, Dept. Yoro, wet thicket, *Standley 53894.* Near Tela, Dept. Atlántida, *Elizabeth R. Mitchell 54;* in banana plantation, *Mitchell 134.*

It is with considerable reluctance that I propose a new species in this already complicated group of the genus *Ipomoea,* whose members are so imperfectly known and so badly in need of critical revision. The present plant, however, I have been quite unable to refer satisfactorily to any of the described species. It is related evidently to *I. purpurea* (L.) Lam., which usually has pubescent leaves and glabrous seeds. It differs from *I. Meyeri* (Spreng.) Don in its shorter sepals and larger corolla.

VERBENACEAE

Citharexylum teclense, sp. nov.—Arbor, ramulis acute tetragonis, vetustioribus ochraceis vel brunnescentibus, junioribus dense puberulis, internodiis brevibus vel elongatis; folia opposita petiolata, petiolo 4-8 mm. longo crassiusculo dense puberulo; lamina subcoriacea, elliptica vel obovato-elliptica vel rarius rotundato-obovata, 8-12.5 cm. longa, 3.5-6.5 cm. lata, abrupte acuta vel interdum tantum acutiuscula, basi cuneato-acuta vel longe angustata, supra viridis, scabra, nervis subimpressis, subtus undique pilis minutis rigidiusculis patentibus albidis molliter hirtella, costa gracili elevata, nervis lateralibus utroque latere c. 7, gracilibus, prominentibus, arcuatis, angulo acuto adscendentibus, prope marginem arcuato-conjunctis, nervulis prominulis reticulatis; flores spicati, spicis

sessilibus vel breviter pedunculatis 3.5-11 cm. longis remote pauciforis, rhachi dense minuteque puberula, bracteis lineari-lanceolatis 1.5-2 mm. longis attenuatis minute puberulis; calyx campanulatus 5-6 mm. longus, 4 mm. latus, obsolete dentatus, dentibus latissime rotundatis apiculatis, minutissime puberulus; corolla extus glabra, tubo crasso 7-8 mm. longo, lobis oblongis 3-3.5 mm. longis crassis apice rotundatis vel retusis; drupae subglobosae 12-14 mm. longae.—Salvador: Finca La Joya, near Santa Tecla, June 4, 1929, *Salvador Calderón 2529* (Herb. Field Mus. No. 592,032, type). Puerta de la Laguna, cultivated, June, 1928, *Calderón 2354*.

Called "café de árbol," presumably because the fruits suggest those of coffee. The species is an isolated one, not closely similar to any other with which I am familiar.

Citharexylum Pringlei Greenm. Proc. Amer. Acad. 41: 243. 1905. *Ligustrum spicatum* Jacques, Rev. Hort. 1863: 339. 1863. *C. spicatum* Sprague, Kew Bull. 1924: 146. 1924, not Rusby, 1900.

Sprague published in 1924 (Kew Bull., 145) a detailed account of the rather extensive synonymy of this Mexican species, and came to the conclusion that its proper name was *Citharexylum spicatum* (Jacques) Sprague. In making this new combination, however, he overlooked the fact that a *Citharexylum spicatum* had been published by Rusby in 1900 (Bull. Torrey Club 27: 81). I have not seen material of Rusby's species, but at least until it has been proved to be a synonym, the specific name *spicatum* can not be used for the Mexican plant, and the latter should, therefore, be known as *Citharexylum Pringlei* Greenm.

LABIATAE

Salvia comayaguana, sp. nov.—Herba erecta 1-1.5 m. alta, ramis densissime breviterque villosis obtuse quadrangularibus validis, internodiis elongatis; folia opposita petiolata crasse membranacea, petiolo 1-4 cm. longo dense breviterque villoso, foliorum supremorum brevissimo; lamina ovata, late ovata vel elliptico-ovata, 6-17 cm. longa, 3-8 cm. lata, acuta vel acuminata, basi obtusa vel rotundata et plerumque abrupte breviterque decurrens, arcte serrata vel crenato-serrata, supra viridis, subdense adpresso-villosula vel interdum fere scabra, ad nervos densius villosula, costa nervisque prominulis, subtus pallidior, ubique dense atque molliter breviterque villoso-pilosa, pilis griseis, costa nervisque prominentibus, nervis lateralibus utroque latere 4-6 arcuatis; flores verticillati, verticillis plerumque 6-8-floris, inferioribus 1.5-3.5 cm. distantibus, in racemum spiciformem 10-19 cm. longum et 2 cm. latum terminalem erectum dispositis, pedicellis 2-3 mm. longis pilosis, bracteis deciduis lanceolato-ovatis 10-12 mm. longis longe subulato-acuminatis dense albido-pilosis; calyx 9 mm. longus dense pilis rigidiusculis albidis villosulo-pilosus, supra paullo dilatatus, laciniis tubo brevioribus

anguste triangularibus longe subulato-acuminatis; corolla purpureo-rubra 18 mm. longa, tubo extus glabro 1 cm. longo superne vix dilatato cylindrico, labio superiore lato extus dense villosulo, inferiore subaequali extus sparse villosulo; stamina non exserta.—Honduras: Moist thicket near Siguatepeque, Dept. Comayagua, alt. 1,100 m., February, 1928, *Paul C. Standley 55842* (Herb. Field Mus. No. 581,412, type), *55916*.

In the form of the inflorescence and calyx and in pubescence this plant somewhat resembles *S. Lindenii* Benth., but the latter has cordate leaves and a very different corolla.

Salvia Fernaldii, sp. nov.—Herba ut videtur perennis, caulibus erectis vel adscendentibus ramosis 20-50 cm. longis gracilibus viridibus obtuse tetragonis glabratis vel plerumque minute puberulis vel pilis sparsis longis albidis patentibus pilosis, internodiis elongatis; folia opposita longe petiolata, petiolo plerumque 6-10 mm. longo incurvo-puberulo vel glabrato; lamina membranacea, deltoidea vel deltoideo-ovata, 1-2 cm. longa, 0.7-1.7 cm. lata, obtusa vel acutiuscula, basi truncata, interdum abrupte breviterque decurrens, crenata, dentibus utroque latere c. 7, utrinque sparse scaberula, subtus paullo pallidior; flores verticillati, verticillis paucifloris remotis racemos 2-15 cm. longos fere nudos efformantibus, bracteis parvis lanceolatis pedicellis plerumque brevioribus, pedicellis adscendentibus dense puberulis 2.5-3.5 mm. longis; calyx maturus anguste campanulatus 5-6 mm. longus costatus, sparse puberulus vel scaberulus, rarius glabratus, saepe pilis paucis longioribus eglandulosis albidis patentibus indutus, lobis tubo brevioribus subaequalibus ovatis acutis erectis minutissime ciliolatis; corolla 8-9 mm. longa extus sparse puberula, tubo calyci aequali fauce paullo dilatato.—Yucatan: Chichen Itzá, February 27-28, 1899, *C. F. Millspaugh 1634* (Herb. Field Mus. No. 61, 634, type). Izamal, in 1888, *Gaumer*. Pocoboch, *Gaumer 1333*. Kancabtsonot, *Gaumer 23519*. Buena Vista, *Gaumer* in 1899.

The specimens have been referred to *S. micrantha* Vahl and *S. serotina* Sw., and the species is undoubtedly related to *S. micrantha*. In that, however, the calyx is copiously glandular-pubescent, while in this Yucatan plant there is no trace of gland-tipped hairs about the inflorescence.

The species is named for Professor M. L. Fernald, as a mark of appreciation of his excellent monograph of the Mexican species of *Salvia*, which has proved invaluable to all students of the Mexican flora.

Micromeria Brownei (Sw.) Benth.—To the synonymy of this widespread tropical weed must be added the following: *Hedeoma gracillima* Jones, Contr. West. Bot. 15: 150. 1929.

SOLANACEAE

Physalis mayana, sp. nov.—Suffrutex, ramis validis teretibus et obscure angulatis ochraceis dense stellato-tomentosis; folia solitaria, petiolo 0.6-2 cm. longo supra et saepe fere ad basin alato, e lamina non plane distincto; lamina late ovata vel rhombico-ovata, 6-15 cm. longa, 3.5-9 cm. lata, acuta vel breviter acuminata, versus basin abrupte angustata, longiattenuata et ad petiolum decurrens, undulata vel irregulariter, grosse et obtuse sinuato-dentata, saepe integra vel subintegra, tenuis, supra viridis, stellato-puberula, subtus paullo pallidior, dense molliterque stellato-tomentosa; flores in axillis fasciculati, pedicellis gracilibus in anthesi 7-13 mm. longis stellato-tomentosis; calyx campanulatus 6-7 mm. longus, 5-6 mm. latus, stellato-pubescens, lobis triangularibus tubo paullo brevioribus; corolla campanulata 12 mm. longa et fere aequilata, lobis ovato-triangularibus obtusis tubo subaequilongis, extus breviter villosis; antherae 4 mm. longae, 1.5 mm. latae, obtusae, erectae, glabrae, rimis lateralibus dehiscentes; calyx fructiferus accrescens et inflatus, late ovoideus, 3 cm. longus et plus quam 2 cm. latus, apice contractus et fere clausus, basi late rotundatus vel concavus, tenuis, pilis plerumque stellatis minute pubescens; bacca sessilis globosa glabra 1 cm. diam.; semina numerosa compressa 1.5 mm. longa pallide brunnescentia grosse reticulata.—Yucatan: Without definite locality, in 1917-21, *G. F. Gaumer 24381* (Herb. Field Mus. No. 552,374, type). Chichankanab, *Gaumer 1504.* San Felipe, *Gaumer 1421.* Without definite locality, *Gaumer 1000.*

This plant is related to *P. melanocystis* (Robinson) Bitter, but that species differs in its small narrow leaves, simple pubescence, and smaller fruiting calyces.

Solanum Lundellii, sp. nov.—Frutex inermis, ramulis gracilibus teretibus densissime stellato-hispidulis, internodiis 1-3.5 cm. longis; folia solitaria, breviter petiolata, petiolo gracili 4-6 mm. longo dense stellato-hispidulo; lamina membranacea ovato-oblonga vel lanceolato-oblonga, 5-11 cm. longa, 2-4.5 cm. lata, subabrupte longiacuminata, acumine angusto attenuato acuto, basi obliqua, latere interiore cuneato-acuta, exteriore rotundata, utrinque subdense stellato-pilosula, pilis simplicibus intermixtis, integra, supra viridis, nervis vix prominulis, subtus paullo pallidior, nervis lateralibus utroque latere c. 6, angulo acuto adscendentibus, arcuatis, remote a margine conjunctis; flores ad axillas fasciculati, numerosi, pedicellis gracilibus 5-15 mm. longis dense molliterque pilis ochraceis stellato-pilosis; calyx fere ad basin 5-fidus, laciniis oblongis vel late oblongis 5-6 mm. longis apice obtusis vel rotundatis, extus dense stellato-pilosulis; cetera ignota.—British Honduras: Roaring Creek, August, 1929, *C. L. Lundell 324* (Herb. Field Mus. No. 602,915, type).

A relative of *S. extensum* Bitter, a common species of the Canal Zone, Panama.

Solanum yucatanum, sp. nov.—Frutex, ramulis teretibus subdense pilis brevistipitatis pauciramosis ferrugineis indutis, aculeatis, aculeis 7 mm. longis, basi compressis et 5-6 mm. latis, divaricatis vel paullo decurvis, basi pilis paucis stipitatis stellatis indutis, aliter glabris; folia solitaria vel saepe in axillis foliis 1-2 parvis comitata, petiolis 4-10 mm. longis stellato-hispidulis saepe aculeo longo gracili armatis; lamina oblonga vel elliptico-oblonga, 3-6.5 cm. longa, 1.5-3 cm. lata, versus apicem obtusum vel acutiusculum angustata, basi valde inaequalis, utroque latere rotundata vel obtusa sed uno latere 2-5 mm. infra alterum protracta, crassa, aspera, supra viridis, dense stellato-hispidula, subtus pallidior, stellato-tomentosa, pilorum brevistipitatorum ramulis gracillimis longis intertextis, venis subtus prominentibus, costa interdum aculeis 1-2 longis gracilibus rectis armata, nervis lateralibus utroque latere 6-7 arcuatis, marginibus integris; flores hermaphroditi, cymis lateralibus vulgo 2-3-floris, pedunculis usque ad 3 mm. longis stellato-hispidulis inermibus; calyx in anthesi 5-6 mm. longus (in fructu usque ad 15 mm.), inermis vel prope basin aculeis 1-2 gracilibus munitus, fere ad basin 5-lobus, lobis lineari-oblongis vel anguste lanceolato-oblongis, apicem obtusum versus angustatis, utrinque stellato-hirtellis, patentibus; corolla 7 mm. longa fere ad basin lobata, laciniis oblongo-linearibus attenuatis extus sparse stellato-hispidulis; filamenta 2 mm. longa, antheris 4 mm. longis liberis basi cordatis glabris superne angustatis, poris apicalibus; stylus antheris aequilongus; bacca globosa glabra 8 mm. diam.—Yucatan: Bocas de Silám, in 1917-21, *G. F. Gaumer 24352* (Herb. Field Mus. No. 552,358, type). Chichankanab, *Gaumer 2000.*

This is evidently a member of the group which includes *S. laurifolium* Mill. and *S. diversifolium* Schlecht., but it is well marked by the small entire leaves.

GESNERIACEAE

Corythroloma Warscewiczii (Bouché & Hanst.), comb. nov. *Gesnera Warscewiczii* Bouché & Hanst. Ind. Sem. Hort. Berol. 1861. App. 9. 1861; Linnaea 34: 273. 1865-66.

Columnea pilosissima, sp. nov.—Frutex gracilis epiphyticus sparse ramosus, ramis subteretibus ochraceis dense pilis longis patentibus fulvis vel ochraceis pilosis, internodiis brevibus; folia breviter petiolata tenuiter carnosa, petiolo 2-4 mm. longo gracili piloso; lamina anguste oblonga vel lanceolato-oblonga, 2-3 cm. longa, 6-8 mm. lata, apicem versus paullo angustata, obtusa, basi acuta, integra, utrinque dense pilosa, supra enervia, costa subtus prominula, venis obsoletis; flores solitarii sessiles vel subsessiles; sepala sublibera lanceolata attenuata c. 9 mm. longa subaequalia dense pilosa viridia; corolla laete coccinea extus subsparse pilis longis multicellularibus pilosa, 5-6 cm. longa, tubo superne sensim ampliato, fauce 8 mm. lato, limbo bilabiato, labio superiore fere 2 cm. longo concavo obtuso, inferiore 1 cm. longo, laciniis oblongis

attenuatis obtusis; stamina exserta labium superiorem aequantia, antheris oblongis 2.5 mm. longis.—Honduras: On tree in wet forest on the hills high above Lancetilla Valley, Dept. Atlántida, alt. 600 m., March 13, 1928, *Paul C. Standley 56789* (Herb. Field Mus. No. 581,792, type). Also *Nos. 54176* and *55614* (both sterile) from the same region.

The Columneas are among the very handsomest of all the plants of Central America, but most of the species of the region are confined to the mountains of Costa Rica and Panama. Only a few extend to northern Central America and Mexico, and the present plant seems to be an isolated species, somewhat noteworthy because of its occurrence at such a low elevation.

ACANTHACEAE

Ruellia longipila, sp. nov.—Herbacea, ramulis gracilibus subteretibus pilis longis albis vel fulvescentibus mollibus patentibus satis dense pilosis, internodiis brevibus vel elongatis; folia longe petiolata membranacea, petiolo gracili 7-14 mm. longo longipiloso; lamina lanceolato-oblonga, 4.5-9.5 cm. longa, 1.5-3.3 cm. lata, acuta vel acuminata, basi acuta vel subobtusa, supra viridis, in sicco fusca, pilis longis multicellularibus albis pilosa, subtus pilis similibus densius pilosa, supra rhaphidibus brevibus minutis pallidis dense conspersa, costa subtus prominente gracili, nervis lateralibus utroque latere c. 8; flores axillares solitarii, sessiles vel brevissime pedicellati; calycis laciniae lineares 1.5 cm. longae virides albo-pilosae; corolla purpurascens extus albido-puberula, tubo gracillimo 17 mm. longo, 1.5 mm. crasso, fauce abrupte dilatata, tubo aequilonga, ore 8 mm. lata, lobis rotundatis inaequalibus, superioribus 8 mm. longis, inferioribus paullo longioribus; antherae oblongo-lineares 3 mm. longae; capsula oblonga glabra 12 mm. longa, abrupte breviterque acuminata, basi non contracta.—British Honduras: Stann Creek District, common in high bush ground, in 1929, *C. L. Stocker 20* (Herb. Field Mus. No. 597,929, type). Roaring Creek, August, 1929, *C. L. Lundell 322.*

Noteworthy for the dense and unusually long, white pubescence.

Jacobinia leucothamna, sp. nov.—Frutex 2-metralis, ramis crassiusculis teretibus ochraceis vel albidis, novellis dense pilis pallidis adpresso-pilosis, internodiis brevibus vel elongatis; folia breviter petiolata subcoriacea, petiolo crassiusculo 2-4 mm. longo hirtello vel puberulo; lamina late elliptica vel rarius oblongo-elliptica 2-4.5 cm. longa, 1.7-3.3 cm. lata, apice rotundata et apiculata vel interdum obtusa, basi rotundata vel obtusa, interdum abrupte breviterque contracta, supra viridis, sparse hinc inde pilis minutis albidis pilosula vel glabrata, interdum scaberula, subtus ubique dense velutino-pilosula, costa gracili elevata, nervis lateralibus utroque latere c. 7, angulo lato adscendentibus, prominulis, gracillimis, valde arcuatis, juxta marginem conjunctis; flores spicati,

spicis ex axillis supremis ortis simplicibus vel furcatis, laxe pauciflоris, breviter pedunculatis, 1-2 cm. longis, rhache pilosula, bracteis subulatis hispidulis c. 1.5 mm. longis; sepala lanceolato-subulata 2.5 mm. longa attenuata erecta pilosula; corolla alba 8-9 mm. longa extus pilosa, tubo anguste infundibuliformi, superne paullo dilatato, limbo bilabiato tubo breviore; antherae loculi oblongi 1 mm. longi inaequaliter inserti, basi obtusi.—Yucatan: Silám, *G. F. Gaumer 1242* (Herb. Field Mus. No. 57,171, type), *2280*.

Jacobinia ensiflora, sp. nov.—Frutex metralis, trunco 2.5 cm. diam., ramulis gracilibus subteretibus glabris, internodiis elongatis; folia petiolata, petiolo gracili 1.8-3.5 cm. longo glabro; lamina membranacea, anguste lanceolato-oblonga, 19-20 cm. longa, 5-5.5 cm. lata, longe et abrupte sensimve acuminata, acumine angusto attenuato, basin versus longe angustata, integra vel obscure undulata, glabra, supra viridis, sublucida, costa nervisque prominulis, subtus paullo pallidior, costa gracili elevata, nervis lateralibus utroque latere c. 7, gracillimis, angulo acutissimo adscendentibus, subarcuatis, marginem fere attingentibus; inflorescentia terminalis longissime graciliterque pedunculata, dense cymoso-paniculata, multiflora, corollis neglectis c. 4 cm. longa, pedunculo 16 cm. longo dense minuteque patenti-piloso, ramis brevibus dense glanduloso-pilosulis, bracteis oblongis vel late linearibus acutis dense glanduloso-pilosulis calyce duplo brevioribus; sepala erecta anguste linearia longe sensimque attenuata, dense glanduloso-pilosula; corolla laete aurantiaca linearis, fere 6.5 cm. longa, extus subdense glanduloso-villosula, tubo crassiusculo 3-3.5 mm. lato, labio superiore fere 3 cm. longo, inferiore brevissimo; stamina 2 inclusa, filamentis gracillimis glabris, antheris lineari-oblongis fere 5 mm. longis, loculis inaequaliter insertis, basi muticis; stylus gracillimus glaber.—British Honduras: Middlesex, in forest, alt. 75 m., October 2, 1929, *W. A. Schipp 354* (Herb. Field Mus. No. 603,046, type).

Justicia myriantha, sp. nov.—Herba erecta vel decumbens 20-35 cm. alta multiramosa, caulibus gracilibus teretibus viridibus striatis bifariam incurvo-puberulis, internodiis elongatis; folia longe petiolata subcoriacea, petiolo gracili 0.8-2.5 cm. longo puberulo; lamina rotundato-ovata, interdum elliptico-ovata, 1.5-4 cm. longa, 1-3 cm. lata, obtusa vel acutiuscula, basi rotundata vel obtusa, integra, utrinque dense rhaphidibus brevibus pallidis conspersa, ad venas puberula vel fere omnino glabra, laete viridis, concolor, costa subtus elevata crassiuscula, nervis lateralibus utroque latere 5-6 angulo acuto adscendentibus arcuatis; flores in spicas graciles subrigidas remote paucifloras dispositi, spicis plerumque 5-13 cm. longis paniculatis vel ad axillas fasciculatis, rhache glanduloso-pilosula, bracteis rigidis subulatis viridibus attenuatis c. 2 mm. longis adpressis glanduloso-puberulis; sepala 2.5-3 mm. longa lineari-subulata erecta viridia glanduloso-puberula; corolla c. 5 mm. longa extus glabra, tubo supra vix dilatato, lobis obovatis apice obtusis vel rotundatis tubo paullo longioribus; antherae

c. 0.7 mm. longae, loculis paullo inaequalibus basi breviter mucronatis; capsula 4-5 mm. longa acuminata glabra graciliter 5 mm. longe stipitata; semina 3 mm. longa dense minuteque tuberculata.—Yucatan: Kancabtsonot, in moist soil, January, 1917, *G. F. Gaumer 23557* (Herb. Field Mus. No. 465,924, type). Buena Vista Xbac, *Gaumer 1102*. Lake Chichankanab, April, 1917, *Gaumer 23718, 23742*.

The generic position of this plant is somewhat uncertain.

Justicia salvadorensis, sp. nov.—Herba perennis decumbens, caulibus simplicibus vel pauciramosis, suberectis, gracilibus, subteretibus, puberulis et sparse pilis patentibus pilosis, internodiis elongatis; folia opposita, petiolata, membranacea, petiolo gracili 3-8 mm. longo puberulo et piloso; lamina ovata vel late ovata, 2.5-6.5 cm. longa, 1.5-3 cm. lata, obtusa vel acuta, basi abrupte contracta et anguste decurrens, supra viridis, sparse hispidula vel fere glabra, densissime rhaphidibus linearibus minutis pallidis conspersa, subtus pallidior, ad nervos sparse hispidula, rhaphidibus dense notata, costa gracili elevata, nervis lateralibus utroque latere c. 5, gracilibus, arcuatis, prominentibus, angulo acuto adscendentibus, prope marginem conjunctis; flores spicati, spicis terminalibus 4-10 cm. longis breviter pedunculatis, remote paucifloris, rhachi gracili erecta pilis brevibus hispidula; bracteae erectae virides lineari-subulatae 6-8 mm. longae hispidae; calyx fere ad basin 4-fidus, laciniis lineari-subulatis hispidulis 5 mm. longis; corolla in alabastro calyce dimidio brevior, puberula.—Salvador: Hacienda El Platanar, Suchitoto, in 1928, *Salvador Calderón 2413* (Herb. Field Mus. No. 580,407, type).

Pseuderanthemum nanum, sp. nov.—Herba perennis 5-17 cm. alta, basi plus minusve fruticosa, radice crassa lignosa, caule simplici vel pauciramoso albido lucido minute puberulo, internodiis brevibus; folia coriacea petiolata, petiolo crassiusculo 3-7 mm. longo minute puberulo; lamina ovata vel ovato-elliptica, 2-5 cm. longa, 1-2.5 cm. lata, versus apicem plus minusve angustata, obtusa vel subrotundata, basi obtusa vel interdum abrupte contracta et decurrens, lucida, integra, glabra, supra viridis, ut videtur in vivo pallide picta, costa nervisque non elevatis, margine cartilagineo-incrassato, subtus pallidior, costa crassiuscula elevata, nervis lateralibus utroque latere c. 4 obscuris, nervulis obsoletis; flores spicati, spicis terminalibus simplicibus solitariis vel geminatis, 2-5 cm. longis, sessilibus vel breviter pedunculatis, dense multifloris, bracteis subulatis c. 6 mm. longis rigidis erectis nervulosis puberulis imbricatis; sepala 9 mm. longa subulato-attenuata minute puberula rigida erecta; corollae tubus gracilis c. 8 mm. longus superne vix dilatatus, glaber, lobis subaequalibus late patentibus obovatis apice obtusis vel rotundatis glabris tubum aequantibus; antherae inclusae.—Yucatan: Silám, *G. F. Gaumer 1305* (Herb. Field Mus. No. 57,234, type). Progreso, *Gaumer 2295*.

Drejerella longipes, sp. nov.—Herba erecta 20-30 cm. alta ramosa, ramis subteretibus ochraceis vel albidis subgracilibus densissime pilis brevibus patentibus mollibus plus minusve viscidis pilosis, internodiis brevibus vel elongatis; folia longissime petiolata, petiolo 1-2.2 cm. longo gracillimo dense viscido-piloso; lamina membranacea rotundato-ovata, 7-17 mm. longa, 8-14 mm. lata, acuta vel subobtusa, basi late rotundata, integra, laete viridis, utrinque dense viscido-pilosula, basi trinervia; flores in spicas densas foliaceo-bracteatas c. 1.5 cm. longas et fere aequilatas dispositi, bracteis foliis conformibus sed brevius petiolulatis, petiolulo c. 3 mm. longo, lamina c. 5 mm. longa, obtusa vel acuta, apiculata, densissime molliterque pilosula; sepala lineari-subulata 4 mm. longa viridia attenuata dense pilosa; corolla ut videtur alba 11 mm. longa, extus glabra, tubo gracili 6 mm. longo et 1 mm. crasso, lobis subaequalibus tubum aequantibus, apice obtusis vel rotundatis; antherae subexsertae, loculis c. 1 mm. longis paullo inaequalibus.—Yucatan: Chichen Itzá, February 27-28, 1899, *C. F. Millspaugh 1621* (Herb. Field Mus. No. 437,703, type). Buena Vista, in 1899, *Gaumer.*

In general appearance the plant suggests *Drejerella origanoides* (Nees) Lindau, of Cuba. It is noteworthy for the very small leaf blades, nearly uniform in size, borne on very long, slender petioles.

Glockeria Moralesii, sp. nov.—Rami herbacei graciles teretes virides, pilis gracilibus brevibus albidis sparse villosuli et supra glanduloso-pilosuli, internodiis elongatis; folia opposita longe petiolata membranacea, petiolo gracili 1.5-4.5 cm. longo villosulo; lamina ovata 6-13 cm. longa et 2.5-6 cm. lata et ultra, longe angusteque acuminata, basi acuta vel abrupte contracta et decurrens, supra viridis, sparse villosula, subtus paullo pallidior, praesertim ad nervos villoso-pilosula; inflorescentia terminalis thyrsoideo-paniculata laxissime multiflora, 20-27 cm. longa, c. 12 cm. lata, longipedunculata, ramis primariis divaricatis repetite dichotomis glanduloso-villosulis gracilibus, floribus in cymas parvas laxas dispositis graciliter pedicellatis, pedicellis 2-5 mm. longis, bracteis viridibus anguste triangularibus plerumque 1 mm. longis; calyx 5-fidus, laciniis fere distinctis 3.5-4 mm. longis linearibus viridibus glanduloso-puberulis attenuatis; corolla ut videtur rubra, 12 mm. longa, extus glabra, tubo brevissimo c. 2 mm. longo, fauce elongata 3 mm. lata cylindracea paullo curvata, limbo bilabiato, labio postico angusto suberecto 3 mm. longo, antico trilobo, lobis vix 2 mm. longis rotundatis; stamina fere 1 cm. longe exserta, filamentis gracillimis glabris, antheris oblongis 3 mm. longis obtusis; stylus staminibus longior; capsula glabra 14 mm. longa, abrupte contracta et longe stipitata, acuta; semina 4, suborbicularia, dense longeque verruculosa.—Guatemala: San Martín, Dept. Chimaltenango, alt. 1,800 m., November, 1928, *Jesús Morales R.1237* (Herb. Field Mus. No. 599,978, type).

Vernacular name, "coqueta."

BIGNONIACEAE

Arrabidaea belizensis, sp. nov.—Frutex alte scandens, trunco 7.5 cm. diam., ramulis gracilibus subteretibus vel ad nodos paullo compressis et dilatatis, glabris, internodiis elongatis; folia bifoliolata petiolata, petiolulis gracilibus 2-3 cm. longis teretibus glabris; foliola chartacea late elliptica, ovali-elliptica vel late ovato-elliptica, 4.5-12 cm. longa, 3-7 cm. lata, abrupte breviterque acuminata, acumine triangulari obtuso vix 1 cm. longo, basi rotundata vel subtruncata et saepe abrupte breviterque decurrens, supra glabra, costa nervisque prominulis, subtus ad costam nervosque sparse fulvo-pilosa, ad axillas plus minusve barbata, costa gracili elevata, nervis lateralibus utroque latere c. 4, angulo acuto adscendentibus, nervulis utrinque prominulis reticulatis; inflorescentia ut videtur cymoso-paniculata, floribus longe pedicellatis; calyx anguste campanulatus 2 cm. longus, ore 1 cm. latus, glaber vel glabratus, breviter bilabiatus, lobis c. 8 mm. longis obtusis; corolla purpurea extus sparse puberula, c. 5 cm. longa; ovarium oblongum glabrum 4 mm. longum.—British Honduras: Middlesex, in jungle, alt. 60 m., July 4, 1929, *W. A. Schipp 284* (Herb. Field Mus. No. 598,217, type).

The available material is in poor condition for study, and the proper generic position of the plant is somewhat uncertain.

Arrabidaea Lundellii, sp. nov.—Frutex alte scandens, trunco usque ad 15 cm. diam., ramulis gracilibus teretibus rimosis dense et minutissime puberulis, internodiis elongatis; folia bifoliolata 12-18 mm. longe petiolata, petiolo tereti minute puberulo, petiolulis c. 1 cm. longis gracilibus; foliola elliptico-ovata 6.5-9.5 cm. longa, 3.5-5 cm. lata, obtusa vel subacuminata, acumine brevi obtuso, basi rotundata, crasse membranacea, supra viridia, dense minuteque puberula, costa nervisque vix elevatis, subtus pallida, ubique tomento minutissimo ochraceo vel albido densissime obtecta, costa nervisque gracilibus elevatis, nervulis prominulis laxe reticulatis; inflorescentia terminalis cymoso-paniculata 7-12 cm. longa, basi interdum foliaceo-bracteata, dense multiflora, ramis dense minuteque puberulis, pedicellis plerumque 4-5 mm. longis; calyx campanulatus 3.5-4.5 mm. longus et fere aequilatus, tomento minutissimo dense indutus, truncatus, dentibus obsoletis; corolla 2.5 cm. longa extus sparse minuteque puberula, tubo 4-5 mm. longo, fauce abrupte ampliata ore 1 cm. lata, lobis paullo inaequalibus late rotundato-obovatis c. 8 mm. longis apice late rotundatis; ovarium minutissime puberulum oblongum, stylo filiformi glabro c. 12 mm. longo.—British Honduras: Honey Camp, Orange Walk, October, 1928, *C. L. Lundell 56* (Herb. Field Mus. No. 580,856, type).

Called "tie-tie." Growing to the tops of the highest trees.

The dense and very minute, pale tomentum of the lower leaf surface is distinctive.

Adenocalymna heterophyllum, sp. nov.—Frutex scandens, ramis subteretibus ochraceis vel brunnescentibus lenticellis magnis pallidis elevatis conspersis, novellis gracillimis sparse et minutissime lepidotis cito glabratis, internodiis plerumque valde elongatis; folia plerumque trifoliolata 2.5-5.5 cm. longe petiolata, petiolo gracili tereti sparse minuteque lepidoto, petiolulis 5-18 mm. longis; foliola crasse membranacea elliptica, late elliptica vel interdum obovato-elliptica, 4-8.5 cm. longa, 2.5-5 cm. lata, apice abrupte acuta vel saepe rotundata vel profunde emarginata, basi obtusa, rotundata vel subacuta et vulgo plus minusve inaequalia, utrinque glabra vel in statu juvenili sparse et minutissime lepidota, costa nervisque supra prominulis, subtus prominentibus, nervulia utrinque prominulis et arcte reticulatis; flores in racemos terminales breves sessiles vel breviter pedunculatos pauci- vel multifloros dispositi, pedicellis dense minuteque lepidotis c. 1 cm. longis; calyx campanulatus truncatus 7-8 mm. longus, ore 6-7 mm. latus, basi obtusus vel rotundatus, minutissime lepidotus, margine tenui minute ciliolato; corolla 6-7.5 cm. longa in alabastro acutiuscula, extus ubique dense villosulo-tomentosa, tubo crasso basi 4-5 mm. lato, superne sensim dilatato, fauce 1.5 cm. lato, lobis rotundatis subaequalibus 12-15 mm. longis; stylus gracilis glaber 3 cm. longus; discus annularis c. 1.5 mm. altus.—Yucatan: Kancabtsonot, May, 1917, *G. F. Gaumer 23889* (Herb. Field Mus. No. 466,372, type). Without locality, *Gaumer 1098.*

The second collection cited has been reported from Yucatan (Field Mus. Bot. 1: 390. 1898, in part) as *Bignonia aequinoctialis* L. From the other species of *Adenocalymna* known from Yucatan, this is distinguished by its much larger corollas.

Tabebuia speciosa, sp. nov.—Arbor 15-metralis, trunco 7.5 cm. diam., ramulis crassiusculis in sicco brunneis vel fuscis glabris lenticellis elevatis conspersis, internodiis brevibus; folia opposita digitatim 3-foliolata, petiolo 6-8 cm. longo gracili tereti glabro, petiolulis 1.5-3 cm. longis subteretibus; foliola elliptica vel ovato-elliptica 11-14 cm. longa, 5.5-7 cm. lata, subcoriacea, integra, abrupte angusteque acuminata, acumine attenuato obtuso, basi rotundata, utrinque glabra, supra viridis, nervis non elevatis, subtus in sicco brunnescens, costa gracili elevata, nervis lateralibus utroque latere c. 10, gracilibus, prominentibus, angulo acuto adscendentibus, subarcuatis; flores in paniculas laxas paucifloras dispositi (paniculae perfectae non visae), c. 1.5 cm. longe pedicellati, pedicellis gracilibus glabris; calyx spathaceus 2.5-2.8 cm. longus, basi late rotundatus, ore oblique et c. 1 cm. profunde fissus, glaber, supra 1 cm. latus et ultra; corolla lutea glabra, tubo 3-4 cm. longo, 1 cm. crasso, lobis subaequalibus rotundatis crenato-undulatis 2 cm. longis.—British Honduras: Middlesex, in jungle, alt. 60 m., September 18, 1929, *W. A. Schipp S.51* (Herb. Field Mus. No. 602,929, type).

It is a surprise to find anywhere in Central America an undescribed *Tabebuia*, and especially so distinct a one as this. The combination of trifoliolate entire glabrous leaves and showy yellow flowers makes the plant quite unlike any of the other species known from the region, and it seems altogether superfluous to compare it in detail with any of them.

RUBIACEAE

Alseis yucatanensis, sp. nov.—Ramuli vetustiores teretes grisei, internodiis brevibus, novellis obtuse tetragonis sparse hirtellis; stipulae triangulares 5 mm. longae cuspidato-acuminatae glabratae caducae; petioli graciles 1-2.5 cm. longi puberuli; lamina obovata, elliptico-obovata vel oblongo-obovata, 8-30 cm. longa, 4-12.5 cm. lata, apice acuminata vel rotundata et subabrupte breviacuminata, versus basin cuneatam longiattenuata, tenuis, supra viridis, glabra vel sparse ad costam pilosa, subtus pallidior, sparse ad nervos setuloso-pilosa vel glabrata, saepe ad axillas barbata, costa valida prominente, nervis lateralibus utroque latere c. 17, gracilibus, rectis sed versus marginem arcuatis; flores sessiles vel brevissime pedicellati, racemis 7-40 cm. longis, aliis simplicibus et axillaribus, aliis in paniculam magnam terminalem dispositis, rhachi dense breviterque pilosa vel puberula; bracteae lanceolatae vel subulatae, hypanthio duplo breviores; racemi densi multiflori; hypanthium clavatum hirtellum 3 mm. longum; calycis lobi ovati obtusi fere 2 mm. longi puberuli; corolla late campanulata 2.5 mm. longa extus puberula, limbo obscure remoteque 5-dentato; filamenta longe exserta inferne villosa, superne glabra, antheris oblongis 1.2 mm. longis; stylus corollam aequans, ramulis longissimis recurvis glabris; capsulae recurvae breviter pedicellatae clavatae, 14 mm. longae et 3 mm. crassae, glabratae, sparse verruculosae, brunnescentes, basin versus longiattenuatae; semina compressa 1-2 mm. longa utrinque 2-3 mm. longe appendiculata.—Yucatan: Without definite locality, 1917-21, *G. F. Gaumer 24247* (Herb. Field Mus. No. 552,253, type), *24394, 24341, 24100, 1043.*

Alseis Blackiana Hemsl. of Panama differs from this Yucatan tree in its narrower leaves, simple spikes, and glabrous corolla. *A. yucatanensis* has been reported previously by the writer (Contr. U. S. Nat. Herb. 23: 1359. 1926), but without specific name, since adequate material for description was not then available. It is said to be called "cacao-che."

Elaeagia Karstenii, sp. nov.—Arbor, ramulis validis subangulatis dense hirtellis vel glabratis, internodiis brevibus; stipulae deciduae oblongae, interdum versus basin paullo angustatae, apice obtusae vel rotundatae, 1 cm. latae, extus dense hispidulae, intus glabrae; folia opposita breviter petiolata, petiolo c. 2 cm.

longo dense hispidulo vel puberulo; lamina coriacea, late elliptica vel obovato-elliptica, 13-25 cm. longa, 7-15 cm. lata, apice subrotundata et brevissime acuminata, acumine late triangulari 5-10 mm. longo obtuso, supra viridis sublucida, primo praesertim prope costam puberula, cito glabrata, costa nervisque prominulis, subtus pallida, secus nervos breviter pilosula vel glabrata, costa valida elevata, nervis lateralibus utroque latere c. 9, angulo lato adscendentibus, prominentibus, arcuatis, prope marginem conjunctis, nervulis obscuris; inflorescentiae terminales, late paniculatae, magnae, c. 20 cm. longae et 25 cm. latae, e basi multiramosae, laxe multiflorae, ramis basalibus adscendentibus, ceteris divaricatis, dense puberulis vel pilosulis, floribus cymose glomeratis, subsessilibus vel 1-2.5 mm. longe pedicellatis, bracteis minutis late ovatis obtusis; hypanthium late turbinatum 1.2 mm. longum dense puberulum; calyx glaber 1.2 mm. longus brevissime 5-lobus, lobis late rotundatis apiculatis; corolla 3-3.5 mm. longa, fere ad basin 5-fida, laciniis oblongis obtusis, fauce dense albido-barbata; filamenta glabra exserta, antheris ovalibus 1 mm. longis; capsula globosa glabrata 2 mm. longa.—Venezuela: Near Colonia Tovar, 1854-55, *A. Fendler 594* (Gray Herb., type; duplicates in herb. N. Y. Bot. Gard. and herb. Mo. Bot. Gard.).—Colombia (perhaps from Venezuela?): Without locality, *Karsten 67* (W).

A close relative of *E. utilis* (Goudot) Wedd., but in the latter the inflorescence is glabrous.

Ladenbergia Pittieri, sp. nov.—Arbor 3-4-metralis, ramulis crassis teretibus glabris, vetustioribus ochraceis rimosis; stipulae oblongo-ovatae 2.5-3 cm. longae obtusae, virides vel ferrugineae, glabrae, cito deciduae; folia breviter petiolata opposita, petiolo valido 2-4 cm. longo subtereti glabro, supra anguste sulcato; lamina subcoriacea, late elliptica, ovali-ovata vel elliptico-ovalis, 12-26 cm. longa, 7-15 cm. lata, acuta vel obtusa, basi rotundata et vulgo profunde cordata vel subcordata, supra viridis, lucida, glabra, nervis prominulis, subtus pallide viridis, glabra vel in axillis sparse obscureque barbata, costa gracili elevata, nervis lateralibus utroque latere c. 7, angulo acuto adscendentibus, prominentibus, gracilibus, fere rectis, prope marginem arcuato-conjunctis, nervulis vix prominulis arcte reticulatis; inflorescentia terminalis 3-10 cm. longe pedunculata, cymoso-paniculata, dense multiflora, 7-9 cm. longa et ultra, basi trichotoma, ramis suberectis dense adpresso-pilosulis, bracteis inconspicuis triangularibus usque ad 3 mm. longis, floribus sessilibus vel breviter pedicellatis congestis; hypanthium 4-5 mm. longum oblongum minute sericeum; calyx 2.5-3 mm. longus glabratus profunde 5-fidus, laciniis oblongis ciliatis; corolla alba extus minute adpresso-pilosa, tubo gracillimo 25-28 mm. longo, 1.6 mm. crasso, superne vix dilatato, ore 2.5 mm. lato, lobis 5 oblongo-lanceolatis 7-9 mm. longis, superne attenuatis, obtusis, patentibus, intus dense puberulis; antherae inclusae; capsula linearis 3.8-5.5 cm. longa, 4-5 mm. lata, ferruginea, glabrata;

semina numerosa compressa, pallide brunnea, ala adjecta 7-10 mm. longa.—Venezuela: Near La Cuchilla, Trujillo, on the road from Valera to Carora, February 10, 1928, *H. Pittier 12943* (Herb. Field Mus. No. 588,346, type; duplicates in U. S. Nat. Herb. and herb. N. Y. Bot. Gard.). Carvajal, near Valera, Trujillo, November 21, 1922, *Pittier 11002* (W).

It is certainly not desirable to add to the already too large number of species ascribed to the genera *Ladenbergia* and *Cinchona*, most of them forms which can be distinguished with difficulty if at all. It is, however, impossible to refer this Venezuelan tree satisfactorily to any species hitherto described in *Ladenbergia*. It is clearly related to *L. magnifolia* (R. & P.) Klotzsch, but in that the corollas are only half as large as in *L. Pittieri*, and the corolla lobes are of approximately the same length as the tube.

Deppea(?) venezuelensis, sp. nov.—Ramuli vetustiores crassi, subteretes, ochracei, glabrati, rimosi, novellis subcompressis vel obtuse angulatis dense sericeis, internodiis 2.5-3 cm. longis; stipulae liberae 1-1.5 cm. longae, anguste triangulares, longe attenuatae, dense sericeae, persistentes, erectae; folia petiolata, opposita, petiolo gracili 2-3.5 cm. longo supra late sulcato sericeo; lamina membranacea, elliptico-oblonga vel oblanceolato-oblonga, 16-21 cm. longa, 6-9 cm. lata, abrupte sensimve acuminata, acumine angusto acuto, basin versus longe sensimque angustata, supra viridis, praesertim ad nervos pilis gracilibus subadpressis pilosa, costa et nervis vix prominulis, nervulis prominulis et arcte reticulatis, subtus paullo pallidior, ubique sparse, ad nervos densius, sericea, costa gracili elevata, nervis lateralibus utroque latere c. 15, gracilibus, prominentibus, subarcuatis, in marginem desinentibus, nervulis prominentibus arcte reticulatis; inflorescentiae axillares, cymosae, fasciculatae, 5-9 mm. longe pedunculatae, laxe pauciflorae, floribus pedicellatis, pedicellis 3-5 mm. longis dense sericeis, bracteis oblongis linearibusve 3-6 mm. longis sericeis; calyx ad apicem capsulae persistens, fere ad basin 5-fidus, laciniis spathulatis vel lineari-oblongis 5-6 mm. longis inaequalibus acutis viridibus, adscendentibus vel subpatentibus, utrinque sericeis; discus annularis crassus; capsula semiglobosa, 2-3 mm. longa, conspicue 5-costata, dense sericea, apice truncata, 2-locularis, placentis septo affixis; semina numerosissima, globosa, 0.4 mm. diam., foveolata.—Venezuela: Without locality, in 1842-43, Funcke *793* (Herb. Kew., type).

I feel confident that this plant does not belong to the genus *Deppea*, a group unknown heretofore south of Panama, but the form of the fruit and seeds and the axillary inflorescence seem to indicate its relationship to this genus. It has been impossible to discover a more satisfactory place for it, but it is probable that

the flowers, when available, will show that the plant represents a new generic type.

Chimarrhis Pittieri, sp. nov.—Arbor magna, ramulis crassis, vetustioribus rimosis, novellis puberulis vel glabratis saepe subcompressis; stipulae deciduae (perfectae non visae), extus adpressopilosae, intus glabrae; folia breviter petiolata opposita, petiolo 1-2 cm. longo strigilloso supra late sulcato; lamina oblongo-obovata vel late obovata, 14-32 cm. longa, 6.5-17 cm. lata, subcoriacea, abrupte breviterque acuminata, acumine anguste triangulari 1-1.5 cm. longo attenuato, basin versus sensim angustata vel interdum abrupte contracta et decurrens, supra viridis glabra, nervis prominulis, subtus fere concolor, ubique minute sed ad nervos densius strigillosa, costa valida elevata, nervis lateralibus utroque latere c. 15, angulo acuto adscendentibus, prominentibus, gracilibus, fere rectis, prope marginem arcuato-conjunctis, nervulis prominulis arcte reticulatis; inflorescentiae terminales vel ex axillis supremis nascentes, sessiles vel breviter pedunculatae, e basi ramosae, dense multiflorae, basi foliaceo-bracteatae, bracteis superioribus quoque interdum foliaceis, ramis rigidis validis angulo lato adscendentibus compressis angulatisque, dense strigillosae, bracteis paucis plerumque 1-2 mm. longis triangularibus acutis, floribus densissime cymoso-glomeratis sessilibus vel breviter pedicellatis; capsula late obovoidea 3.5-4 mm. longa, basi acutiuscula, dense strigillosa, striato-costata, septicide bivalvis, epicarpio a endocarpio secedente; calyx 1.5 mm. longus cupularis, brevissime lobatus, extus minute strigillosus, persistens.—Venezuela: Without definite locality, in 1925, *H. Pittier 11954* (U. S. Nat. Herb. No. 1,281,421, type; duplicate in herb. N. Y. Bot. Gard.). Quebrada de los Hermanos near Macuto, Quebrada del Río de la Guayra, etc., April, 1854, *Birschel* (Herb. Kew.).

According to Birschel, the leaves are sometimes 30-45 cm. long. Pittier gives the vernacular name as "lengua de vaca," doubtless an allusion to the shape of the leaves. From *C. cymosa* Jacq. the present species differs in the much larger capsules and densely glomerate flowers, and in not having tufts of hairs beneath in the axils of the leaves.

The species is easily distinguished from others occurring in Venezuela and Colombia by the dense congested inflorescence. The leaves of the specimens cited exhibit unusual variation in size and in amount of pubescence.

Hoffmannia apodantha, sp. nov.—Frutex 1-3-metralis ramosus, ramulis gracilibus vel validis, sparse breviterque villosis vel glabratis, obtuse tetragonis, vetustioribus ochraceis, internodiis elongatis; stipulae anguste oblongae, 4-6 mm. longae, deciduae, obtusae, extus ferrugineo-villosulae; folia opposita, petiolo gracili

1-4 cm. longo sparse ferrugineo-villosulo vel glabrato; lamina elliptico-oblonga vel elliptica, 7.5-22 cm. longa, 3-10 cm. lata, acuta vel acuminata, acumine anguste triangulari obtuso vel acuto, basin versus angustata et sensim decurrens, membranacea, supra viridis, glabra, rhaphidibus minutis pallidis dense conspersa, nervis non elevatis, subtus pallida, praecipue ad nervos breviter et subdense ferrugineo-villosula vel serius glabrata, costa crassa elevata, nervis lateralibus utroque latere c. 13, gracilibus, prominulis, angulo lato adscendentibus, arcuatis, prope marginem conjunctis, nervulis inconspicuis laxe reticulatis; flores in axillis dense congesti, in cymas breves densas dispositi, sessiles vel subsessiles; hypanthium villosulo-puberulum vel fere glabrum, calyce 0.5-0.8 mm. longo 4-dentato, dentibus late triangularibus obtusis vel acutiusculis glabratis; corolla 4.5-7 mm. longa, in alabastro obtusa vel subacuta, extus glabra, lobis oblongis acutiusculis, tubum aequantibus vel interdum multo longioribus; bacca subglobosa rubra 4 mm. longa glabrata.—Venezuela: Near Colonia Tovar, alt. 1,200 m., 1854-55, *A. Fendler 546* (Gray Herb., type; duplicate in Herb. Kew.), *590* (G, K, M). Headwaters of Chichiriviche and Petaquire rivers, Federal District, 1,800-2,000 m., *Pittier 8124* (W). Cerros de Avila, Federal District, 1,600 m., *E. Pittier 38* (W). Los Venados, near Caracas, *E. Pittier 174* (G).

Neoblakea, gen. nov.—Frutices; folia opposita breviter petiolata membranacea; stipulae trifidae parvae, intus glanduligerae, deciduae; inflorescentiae terminales, cymoso-paniculatae, laxe multiflorae, floribus hermaphroditis sessilibus secundis parvis bracteolatis, bracteolis basi glandulis 1-2 rubris tuberculiformibus onustis; hypanthium turbinatum; calyx 5-partitus, laciniis angustis, adscendentibus vel subrecurvis, persistentibus; corolla parva infundibuliformis, tubo brevi recto, fauce sparse villoso, intus parte inferiore sparse villosulo, limbi lobis 5 brevibus ovalibus obtusis imbricatis, uno exteriore; stamina 5 fauce corollae inserta, filamentis brevibus glabris, antheris exsertis dorso affixis oblongis; ovarium 3-4-loculare, loculis elongatis tubulosis, semisuperum; ovula in loculis solitaria, ab apice pendula; stylus brevis filiformis, stigmate 3-4-lobo; drupa subglobosa semisupera, carne parca dura, putamine ligneo profunde 3-4-sulcato, loculis angustis; semina pendula.

Type species, *Neoblakea venezuelensis.*

Neoblakea venezuelensis, sp. nov.—Frutex multiramosus, ramulis gracilibus teretibus ferrugineis vel ochraceis, vetustioribus rimosis, novellis glabris vel interdum bifariam puberulis, internodiis plerumque 2-3 cm. longis; stipulae 2-3 mm. longae fere ad basin trifidae, laciniis lineari-filiformibus glabris; petiolus gracilis 2-3 mm. longus ciliatus, basi persistente et tumida; lamina ovata, ovato-oblonga vel elliptico-ovata, 2.5-8 cm. longa, 1.3-3.5 cm. lata, longe acuminata, acumine angusto attenuato, basi obtusa vel subrotundata, supra viridis, sparse scaberula vel fere glabra, costa prominente, nervis vix prominulis, subtus vix pallidior, ad nervos minute adpresso-

pilosula, aliter glabra, costa gracili elevata, nervis lateralibus utroque latere c. 8, gracillimis, prominentibus, angulo acuto adscendentibus, arcuatis, prope marginem conjunctis, nervulis vix prominulis arcte reticulatis; paniculae sessiles et e basi trichotomae vel interdum graciliter pedunculatae, 1.5-4 cm. longae et aequilatae vel latiores, laxe multiflorae, multiramosae, ramulis gracilibus rigidis angulo lato adscendentibus vel divaricatis, bifariam hirtellis, floribus sessilibus et secus ramulos breves paucifloros secundis, bracteis viridibus linearibus vel subulatis 1-3 mm. longis persistentibus, bracteolis subulatis minutis; hypanthium 1 mm. longum adpresso-puberulum, calycis laciniis 1-1.2 mm. longis, lineari-oblongis, sensim attenuatis, acutiusculis, glabris; corolla alba, extus glabra vel ad apicem in alabastro minutissime puberula, 4 mm. longa, tubo crasso superne paullo ampliato, lobis patentibus vel subreflexis tubo paullo brevioribus intus puberulis; antherae 0.7 mm. longae; drupa subglobosa 3.5-4 mm. diam. ferruginea glabrata, calyce persistente vulgo coronata.—Venezuela: Guaremales, road from Puerto Cabello to San Felipe, State of Carabobo, in forest, alt. 10-100 m., June 19, 1920, *H. Pittier 8878* (U. S. Nat. Herb. No. 1,065,273, type; duplicates in Gray Herb. and herb. N. Y. Bot. Gard.). Around Palmasola, in forest along the Aroa River, State of Lara, near sea level, June, 1913, *Pittier 6376* (W). Río Chiquire, August 4, 1891, *Eggers 13388* (W). Los Mengos, July 17, 1891, *Eggers 13388* (W). Without locality, July 29, 1891, *Eggers* (W).

The plant here described is represented by an ample amount of material in good condition, showing an abundance of both flowers and fruits. Its proper allocation has offered great difficulty, but detailed study shows that it must be an abnormal member of the Rubiaceae. It does not fit well in any tribe of the family, but the structure of the fruit and corolla makes necessary its reference to the Guettardeae, although even there it is anomalous. To the Guettardeae belongs another anomalous genus, *Machaonia*, to which the present plant has some general resemblance, as to form of leaves and inflorescence.

It is useless to compare *Neoblakea* with *Machaonia* or other genera of the Guettardeae, because it is not closely related to any of them. Particularly noteworthy is the form of the stipules, and the curious small glands present at the base of the bracteoles. The latter structure does not exist in any other group of the family with which I am familiar.

The fruit is remarkable for the fact that it is about one-half superior, but a similar condition is found in certain other genera of Rubiaceae, notably *Houstonia*. The fruit appears to be dry, and probably it is normally 4-celled, but the number of cells varies as it does in the genus *Guettarda*. When cross-sectioned there is seen

very plainly the stone, with its 4 thin winglike angles, the spaces within and outside which are filled with a somewhat woody, compact tissue which may be sectioned rather easily with a sharp razor blade.

This well-marked new genus of the family Rubiaceae is named for Dr. S. F. Blake, of the United States Department of Agriculture, as a token of personal esteem and in recognition of the great amount of attention which he has devoted to the study of Venezuelan plants.

Cosmocalyx, gen. nov.—Arbores, ramulis teretibus; stipulae interpetiolares distinctae anguste triangulares caducae; folia opposita longipetiolata, lamina lata integra; flores parvi pedicellati cymosi, cymis multifloris in paniculam densam terminalem dispositis, bracteis linearibus vel subulatis; hypanthium obovoideum; calyx plerumque ad basin 4-lobus, lobis in anthesi brevibus inaequalibusque, uno in statu fructifero in laminam magnam ovatam petiolatam integram coloratam foliaceam expanso; corolla parva tubuloso-infundibuliformis, tubo brevi abrupte in faucem obconicam dilatato, lobis 4 oblongis obtusis imbricatis; stamina 4 prope basin faucis corollae inserta, filamentis brevibus linearibus, antheris linearibus contortis basi sagittatis; discus annularis carnosus glaber; ovarium 2-loculare, stylo filiformi antheris aequilongo; ovula solitaria erecta; capsula cylindracea costata coriacea 2-cocca, coccis monospermis; semina cylindracea erecta, endospermo carnoso.

The relationship of this Mexican tree is evidently with the monotypic Cuban genus, *Phyllomelia*, a group known only from scant material. In *Phyllomelia* all the calyx lobes are more or less accrescent, none of them being petiolate; the stipules are persistent, and the anthers obovate. The proper position of both these genera within the family Rubiaceae is still uncertain. They seem to be sharply differentiated from all other American genera, and they form a group which perhaps should be recognized as a distinct tribe.

Cosmocalyx spectabilis, sp. nov.—Arbor 5-8-metralis, ramulis teretibus griseis vel ochraceis rimosis, internodiis brevibus, novellis sparse puberulis; stipulae anguste triangulares 2 mm. longae acutiusculae puberulae vel glabratae caducae; petioli graciles 1-5.5 cm. longi, glabri vel fere glabri; lamina rhombico-obovata vel elliptico-obovata, 6-17 cm. longa, 2-7 cm. lata, subabrupte acuminata, basi acuta vel prope basin abrupte contracta et in petiolum longi-attenuata, tenuis, integra, in sicco rubro tincta, supra viridis, plus minusve lucida, subtus paullo pallidior, secus costam saltem in axillis sparse barbata, costa venisque gracilibus elevatis, nervis lateralibus utroque latere 5-6, adscendentibus, subarcuatis, prope marginem obscure et irregulariter conjunctis; flores cymosi, cymis densis umbelliformibus in paniculam magnam densam terminalem dispositis, paniculis floriferis 3-6 cm. latis, fructiferis usque ad 14

cm. latis, bracteis usque ad 2 mm. longis, pedicellis gracilibus usque ad 5 mm. longis puberulis; hypanthium 1 mm. longum dense fulvo-puberulum; calycis lobi plerumque 4, interdum 5, eorum 3 (vel 4) c. 1 mm. longis late triangularibus vel rotundatis glabratis, alio paullo longiore dense puberulo, in fructu in limbum magnum rubrum vel purpurascentem graciliter 3-7 mm. longe petiolatum dilatato, lamina ovata 2-3.5 cm. longa, 1.2-1.8 cm. lata, prope basin latissima, versus apicem obtusum angustata, basi rotundata et saepe abrupte breviterque decurrente, tenui, integra, ad venas sparse minuteque puberula, lucidula, basi 5-nervia, nervulis prominentibus laxe reticulatis; corolla 7 mm. longa extus sparse minuteque puberula vel glabrata, tubo angusto vix 2 mm. longo, fauce 3 mm. lata, lobis oblongis obtusis intus minute papillosis, tubo subaequalibus; antherae 3.5 mm. longae; capsula cylindracea 6-8 mm. longa costata puberula vel glabrata, basi acuta.—Yucatan: Without definite locality, in 1917-21, *G. F. Gaumer 24270* (Herb. Field Mus. No. 552,275, type), *24219*.

Apparently conspecific is a specimen in the United States National Herbarium from El Talabasal, Michoacán or Guerrero, at 200 m., *Langlassé 404*, collected in October, 1898.

This plant is a remarkable one in several respects. The flowering and fruiting specimens are so different in aspect that at first I did not associate them. In the flowering specimens the calyx lobes are very small, and there is nothing to indicate that one will develop into a large ovate limb. A few sterile flowers present on the fruiting specimens are exactly like the young calyces, else I should hesitate to join the two Yucatan collections.

The tree must be a very showy and handsome one, like *Calycophyllum*, which the fruiting specimens much resemble in general appearance. Its occurrence in two regions so distant as Yucatan and Michoacán is remarkable, and it is strange that so conspicuous a tree has not been collected more frequently, and described long ago.

Randia caracasana, sp. nov.—Frutex erectus, ramulis gracilibus vel crassiusculis, teretibus, brunnescentibus, novellis hirtellis, apice spinis 3-4 validis 6-13 mm. longis armatis; stipulae glumaceae, imbricatae, ovatae, breviter acuminatae, striatae, 3-4 mm. longae, persistentes, glabrae; folia ad apices ramulorum congesta, petiolo 3-5 mm. longo, dense hirtello; limbus late obovatus, rotundato-obovatus, late ovalis, vel rotundato-ovatus, 3-5.5 cm. longus, 2-4 cm. latus, apice abrupte breviterque acuminatus et mucronatus, basi obtusus vel rotundatus, membranaceus, supra viridis, pilis brevibus adpressis sparsis vel densis pilosus vel glabratus, subtus densissime pilis griseis velutino-pilosus, costa et nervis gracilibus, prominentibus, nervis lateralibus utroque latere c. 10, angulo lato vel angusto adscendentibus, fere rectis, prope marginem laxe con-

junctis; flores dioeci, ad apices ramulorum solitarii vel 2-3, breviter pedicellati, pedicellis dense pilosis; calyx fere ad basin in lacinias 5 obovatas cuspidato-acuminatas virides extus breviter pilosas 5-7 mm. longas divisus; corolla floris masculi extus sparse pilosa, tubo gracili, 13 mm. longo, lobis 5, obovatis, obtusis, 8 mm. longis, intus sparse pilosis; antherae exsertae, lineari-oblongae, fere 3 mm. longae, obtusae; bacca immatura globoso-ovoidea, 8 mm. longa, densissime pilosa.—Venezuela: Bosque de Catuche above Caracas, alt. 1,200-1,800 m., June 1, 1913, *H. Pittier 6296* (Herb. Field Mus. No. 531,385, type). Río Catuche, July 15, 1891, *Eggers 13228a.*

The Eggers specimen was determined as *R. spinosa* var. *pubescens* Schum., but in *R. spinosa* the calyx lobes are short and subulate. From *R. calycina* Cham. the Venezuelan plant differs in the abundant pubescence of all parts, shorter calyx lobes, and small anthers.

Anisomeris volubilis, sp. nov.—Frutex volubilis 6-metralis, ramulis gracilibus teretibus fusco-ferrugineis, vetustioribus rimosis, novellis ferrugineo-hirtellis, internodiis brevibus vel elongatis; stipulae deciduae, lanceolato-subulatae, longe attenuatae, hirtellae; folia breviter petiolata opposita, petiolo 2.5-7 mm. longo dense ferrugineo-hirtello; lamina firme membranacea, anguste oblonga vel lanceolato-oblonga, 6-11 cm. longa, 2-3.5 cm. lata, longe sensimque acuminata, acumine acuto, basi acuta vel obtusa, supra fusca, ad costam elevatam hirtella, aliter glabra, nervis prominentibus, subtus brunnescens, ad costam prominentem ferrugineo-hirtella, ad nervos hinc inde adpresso-pilosa, aliter glabra, nervis lateralibus utroque latere c. 8 gracillimis prominulis angulo acuto adscendentibus subarcuatis prope marginem conjunctis, nervulis manifestis sed vix prominulis laxe reticulatis, areolis crebre parallelo-lineolatis; inflorescentiae axillares 1.2-2.3 cm. longe pedunculatae triflorae, pedunculo gracillimo dense ferrugineo-hirtello, floribus sessilibus, bracteis filiformibus 3-4 mm. longis; hypanthium anguste cylindricum 2 mm. longum dense strigosum; calyx 5 mm. longus extus strigosus, fere ad basin in lacinias 4 anguste lineares erectas divisus; corolla albida extus dense strigosa, tubo filiformi 2 cm. longo 0.7 mm. crasso, lobis 4 patentibus linearibus 5-6 mm. longis obtusis; antherae inclusae; stylus gracillimus 13 mm. longus.—Venezuela: In fluminis Guainiae (Río Negro) ripis inundatis, August, 1854, *R. Spruce 3547* (Herb. Kew., type).

Only two corollas, both open, are available for study, and it is somewhat uncertain whether the plant should be referred to *Anisomeris* or *Chomelia.*

Guettarda Gaumeri, sp. nov.—Ramuli teretes fusco-brunnei lenticellis paucis pallidis elevatis conspersi, novellis dense pilis brevibus patentibus ochraceis pilosis, internodiis brevibus vel elongatis; stipulae late ovatae obtusae, extus dense pilis adscendentibus pilosae, intus brunneae et sparse sericeae; petioli validi 2.5-4 mm. longi dense tomentosi; lamina oblonga vel oblongo-

elliptica, 2.5-4.5 cm. longa, 1-2 cm. lata, acuta vel obtusa et apiculata, basi late rotundata vel obtusa, subcoriacea, supra viridis, dense velutino-pubescens, subtus pallidior, densissime pilis patentibus intertextis ochraceis pilosa, costa valida prominente, nervis lateralibus utroque latere c. 8, arcuato-adscendentibus, fere ad marginem subrevolutum distinctis; cymae axillares plerumque 3-florae, pedunculis validis 4-8 mm. longis dense pilis longis adscendentibus pilosis, floribus sessilibus vel lateralibus 2 mm. longe pedicellatis; bracteae lanceolatae vel ovatae, 3-4 mm. longae, calycem aequantes vel longiores; hypanthium ut calyx dense pilis longis adscendentibus pilosum, calyce breviter bilobo hypanthium aequante; corolla in alabastro dense pilis longis albidis adscendentibus pilosa.—Yucatan: Without definite locality, in 1917-21, *G. F. Gaumer 24239* (Herb. Field Mus. No. 552,244).—British Honduras: Honey Camp, September, 1929, *C. L. Lundell 352*.

Closely related to *G. elliptica* Sw., which also occurs in Yucatan, but that is distinguished by having pubescence of short, closely appressed hairs.

Guettarda caracasana Standl., sp. nov. (Pittier, Pl. Usual. Venez. 197. 1926, hyponym).—Frutex vel arbor parva 3-6-metralis, ramulis crassis ferrugineo-brunneis subteretibus rimosis, novellis dense pilis patentibus vel adscendentibus fulvis pilosis, internodiis brevibus vel elongatis; stipulae caducae 7-9 mm. longae, ovatae vel lanceolatae, acuminatae vel attenuatae, dense adpresso-hirsutae; folia opposita, petiolo 1-3 cm. longo dense pilis brevibus plerumque patentibus fulvis vel aureis hirsutulo; lamina late elliptica vel oblongo-elliptica, 7-13 cm. longa, 3-8 cm. lata, crasse membranacea vel subcoriacea, acuta vel breviter acuminata, basi obtusa vel rotundata, supra viridis, dense hirtella vel hispidula, nervis prominulis, subtus pallidior, undique pilis intertextis rigidiusculis tomentosa, ad nervos pilis patentibus vel adpressis hispida, costa gracili elevata, nervis lateralibus utroque latere c. 9, angulo acuto adscendentibus, prominentibus, arcuatis, prope marginem conjunctis, nervulis prominulis reticulatis; cymae densae multiflorae capituliformes, 2.5-7 cm. longe pedunculatae, pedunculo gracili hispidulo et vulgo tomentoso, floribus sessilibus vel brevissime pedicellatis congestis, bracteis lanceolatis vel linearibus calycem aequantibus vel longioribus; calyx tubulosus 4 mm. longus truncatus vel brevissime lobatus, dense fulvo-tomentosus et breviter pilosus; corolla pallide rosea vel alba extus dense fulvo-sericea, tubo gracili, 1.5 cm. longo, superne paullo ampliato, fauce sparse villoso, lobis 6 oblongis, 6-9 mm. longis inaequalibus obtusis, intus glabris; fructus magnus ovalis brunnescens, c. 1.6 cm. longus et 1.2 cm. latus, basi et apice rotundatus, dense minuteque et sparse hispidulus, 6-locularis.—Venezuela: Middle Cotiza, near Caracas, in light forest, June 24, 1917, *H. Pittier 7222* (U. S. Nat. Herb. No. 987,347, type). Between Caracas and La Guayra, 600 m., *Fendler 576* (G). Caracas and vicinity, *Bailey 397* (W). Lower

Cotiza near Caracas, 800-1,200 m., *Pittier 7896* (W). Lower Catuche Wood above Caracas, 1,000-1,200 m., *Pittier 7282* (W). Middle Cotiza near Caracas, 1,000-1,400 m., *Pittier 7050* (W.) Las Ajuntas, *Eggers 13347* (W).

The species is well marked by the large corollas and the copious matted pubescence of the lower surface of the leaves.

Guettarda frondosa Moritz, in herb., sp. nov. *Matthiola frondosa* Kuntze, Rev. Gen. Pl. 1: 228. 1891, nomen.—Ramuli subteretes ferruginei lenticellati, novellis subtetragonis dense strigosis, internodiis 1 cm. longis; stipulae caducae, non visae; folia opposita, petiolo gracili 1-6 cm. longo, sparse vel dense strigoso; lamina late elliptica vel subrotundata, crasse membranacea, 12-15 cm. longa, 8-10 cm. lata, abrupte acuminata, acumine triangulari 1-1.5 cm. longo, basi acuta vel abrupte contracta et decurrens, supra viridis, ad nervos strigosa, aliter glabra, nervis prominulis, subtus paullo pallidior, ad nervos nervulosque minute adpresso-pilosula, aliter glabra, costa gracili elevata, nervis lateralibus utroque latere c. 12, gracilibus, prominentibus, angulo acuto adscendentibus, arcuatis, prope marginem conjunctis, nervulis prominulis transversis rectis parallelis; inflorescentiae axillares bifurcatae, ramis c. 1 cm. longis, dense secundifloris, pedunculo 2.5-4 cm. longo gracili dense minuteque tomentoso, floribus sessilibus; calyx campanulatus 1.2 mm. longus, truncatus vel brevissime et obtuse dentatus, dense et minute tomentulosus; corolla in alabastro 6 mm. longo, tubo crassiusculo extus dense retrorso-sericeo.—Venezuela: La Guayra, *Moritz 1735*, "Herbar. W. Sonder" (Herb. Kew., type).

The type sheet in the Kew herbarium bears this unpublished name attributed to Moritz. Kuntze (l. c.) made a new combination, *Matthiola frondosa*, based upon Moritz's name, but the latter seems not to have been published, and I find no reference to it anywhere. Among the Venezuelan species this plant is easily recognized by the strictly bifurcate inflorescence. The only species similar is *G. discolor* Rusby, but the pubescence of that is altogether different.

Guettarda Pittieri, sp. nov.—Arbor c. 6-metralis, ramulis crassis teretibus ferrugineis, plus minusve rimosis et lenticellatis, novellis dense ochraceo-strigosis; stipulae caducae, 5-6 mm. longae, ovatae, acuminatae, dense pilis subadpressis indutae; folia opposita, petiolo gracili 1-1.8 cm. longo adpresso-pilosulo et sparse patentipiloso; lamina crasse membranacea, late elliptica, elliptica vel oblongo-elliptica, 8-15 cm. longa, 4-8.5 cm. lata, acuta vel acuminata, interdum abrupte acuminata, basi obtusa vel rotundata, rarius acuta, supra viridis, sparse minuteque strigillosa vel glabrata, nervis prominentibus, subtus vix pallidior, undique pilis brevibus nitentibus sericeo-strigosa, costa gracili elevata, nervis lateralibus utroque latere 10-12, prominentibus, angulo acuto adscendentibus, subarcuatis, juxta marginem conjunctis; cymae pauciflorae densae

capituliformes, 1-2.8 cm. longe pedunculatae, floribus sessilibus, bracteis linearibus vel subulatis, plerumque calyce brevioribus; calyx campanulatus 3 mm. longus truncatus dense sericeus; corolla alba extus dense fulvo-sericea, tubo 16-18 mm. longo, superne paullo ampliato, fauce 3 mm. lato, lobis 5-6 oblongis vel late oblongis apice rotundatis intus glabris patentibus; fructus globosus vel depresso-globosus 1.3-1.8 cm. latus, dense et minute tomentosus, 5-6-locularis, basi late rotundatus, apice saepe apiculatus.—Venezuela: Río Chico, Miranda, June 20, 1923, *Alfredo Jahn 1283* (U. S. Nat. Herb. No. 1,186,870, type). Near Caracas, 1,000 m., *Pittier 9622* (W, Y). Between Caracas and La Guayra, 600 m., *Fendler 575* (G). La Guayra, *Moritz 959* (K).

Vernacular name, "cruceto." Related to *G. caracasana*, but differing especially in the appressed pubescence of the leaves.

Malanea Fendleri, sp. nov.—Ramuli teretes crassiusculi ferruginei vel grisei, novellis dense ferrugineo-hirsutis; stipulae deciduae elliptico-ovatae c. 6 mm. longae acutae, dense adpresso-hirsutae; folia opposita, petiolo 6-17 mm. longo ferrugineo-hirsuto; lamina subcoriacea, elliptico-oblonga vel oblonga, 6.5-14 cm. longa, 2.5-6.5 cm. lata, acuta vel abrupte acuta, basi obtusa vel anguste rotundata, supra viridis, glabra vel hinc inde hispida, costa gracili prominula, nervis lateralibus manifestis sed non elevatis, nervulis obsoletis, subtus vix pallidior, brunnescens, ad costam nervosque hispida, aliter pilis brevibus rigidis adpresso-hispidula, costa gracili elevata, nervis lateralibus utroque latere c. 7, prominentibus, angulo lato adscendentibus, arcuatis, prope marginem conjunctis, nervulis arcte reticulatis subimpressis, margine plano; paniculae laxe multiflorae 3-4 cm. longe pedunculatae, 4.5-5.5 cm. longae, 1-1.5 cm. latae, ramis brevibus rigidis divaricatis vel adscendentibus, dense pilis patentibus vel adscendentibus ferrugineo-hispidulis, floribus sessilibus, bracteis minutis calyce multo brevioribus; hypanthium cylindricum glabrum; calyx 1-1.3 mm. longus scaberulus ad medium lobatus, lobis rotundatis; fructus oblongus c. 1 cm. longus, 4 mm. latus, glaber.—Venezuela: Near Colonia Tovar, alt. 1,800 m., 1856-57, *A. Fendler 2555* (Gray Herb., type).

The species does not appear to be closely related to any of those reported from Brazil or the Guianas.

Malanea hirsuta, sp. nov.—Frutex alte scandens, ramulis gracilibus teretibus brunnescentibus sparse lenticellatis, novellis dense breviterque fulvo-hispidis, internodiis brevibus vel elongatis; stipulae caducae c. 5 mm. longae lanceolatae acuminatae, dense adpresso-hispidae; folia opposita, petiolo 6-8 mm. longo valido dense hirsuto; lamina lanceolato-oblonga, 5.5-8 cm. longa, 2-3 cm. lata, acuminata, basi acuta, crasse membranacea, supra viridis, dense hirsuta, costa gracili elevata, nervis lateralibus impressis, nervulis obsoletis, subtus pallidior, dense pilis longis patentibus

pallidis hirsuta, costa gracili elevata, nervis lateralibus utroque latere 10-11, angulo acuto adscendentibus, prominentibus, subarcuatis, marginem planum fere attingentibus; paniculae spiciformes 1-2.5 cm. longe pedunculatae, 2-3 cm. longae, interdum basi ramosae, rhachi dense breviterque hirsuta, floribus sessilibus, bracteis minutis calyce multo brevioribus; hypanthium cylindricum glabrum; calyx 1 mm. longus, lobis brevibus rotundatis hispidulis; fructus oblongus 10-12 mm. longus, 5 mm. latus, basi et apice obtusus, aurantiacus, laevis, glaber, 2-locularis.—Venezuela: A few miles south of Colonia Tovar, alt. 1,050 m., May 16, 1855, *A. Fendler 569* (Gray Herb., type; duplicates in K, M, Y).

The plant shows a close relationship with *M. Fendleri*, but apparently it is quite distinct in the character of the pubescence and in the acute leaf bases.

Malanea ursina, sp. nov.—Ramuli crassi subteretes brunnescentes, novellis dense pilis brunneis rigidis hispidis, internodiis brevibus; stipulae deciduae ovato-oblongae 7 mm. longae acutae extus pilis brevibus adscendentibus hispidae; folia opposita, petiolo crasso 4-6 mm. longo supra sulcato breviter hispido; lamina coriacea, elliptica vel ovato-elliptica, 5-8.5 cm. longa, 2-4.5 cm. lata, abrupte acuminata, acumine angusto obtusiusculo, basi obtusa vel acutiuscula, supra lucida, sparse, ad nervos densius, pilis brunneis patentibus hispida vel serius glabrata, costa et nervis valde impressis, subtus brunnescens, breviter brunneo-hispida, costa crassa elevata, nervis lateralibus utroque latere c. 6, elevatis, gracilibus, arcuatis, prope marginem conjunctis, nervulis reticulatis et manifestis sed vix elevatis, margine revoluto; panicula spiciformis 4 cm. longa et 1 cm. lata, 1.5 cm. longe pedunculata, rhachi hispidula, ramis lateralibus brevissimis, floribus sessilibus dense glomeratis; hypanthium cylindricum; calyx 0.8 mm. longus, lobis brevibus rotundato-ovatis minute adpresso-hispidulis; corolla in alabastro 1.5 mm. longa dense ochraceo-strigillosa.—Venezuela(?): Vasiva, *Spruce* (Herb. Kew., type).

From the species known from the neighboring regions of Brazil, this is easily recognized by the copious spreading pubescence of the leaves, consisting of short and harsh hairs.

Faramea brachysiphon, sp. nov.—Frutex 2-metralis omnino glaber, trunco 5 cm. diam., ramulis gracilibus subteretibus, novellis in sicco pallidis, internodiis elongatis; stipulae persistentes virides subrotundatae 3-4 mm. longae, apice obtusae vel rotundatae, abrupte 1 mm. longe mucronatae; folia opposita breviter petiolata, petiolo gracili 4-7 mm. longo; lamina membranacea, oblonga vel anguste oblonga, 11-16 cm. longa, 3-5 cm. lata, subabrupte acuminata, acumine angusto attenuato obtusiusculo, basi acuta, supra viridis, nervis vix elevatis, subtus paullo pallidior, costa gracillima elevata, nervis lateralibus utroque latere c. 15, gracillimis, prominulis, fere rectis, angulo lato divergentibus, remote a margine irregulariter

conjunctis, nervulis prominulis laxe reticulatis; inflorescentia terminalis cymoso-paniculata 2-2.5 cm. longe pedunculata, c. 3.5 cm. lata, ramulis brevibus glabris, bracteis basalibus linearibus viridibus usque ad 8 mm. longis, aliis minutissimis, pedicellis 1-2 mm. longis; hypanthium late oblongum 1.5 mm. longum, calycis dentibus triangularibus minutis acutis vix 0.5 mm. longis; corolla caerulea glabra, tubo crassiusculo 3 mm. longo, lobis 5 lanceolato-oblongis 6-7 mm. longis obtusis patentibus; antherae lineares semiexsertae.—British Honduras: Middlesex, in jungle, alt. 60 m., September 17, 1929, *W. A. Schipp 345* (Herb. Field Mus. No. 603,047, type).

Among the related blue-flowered species of *Faramea* occurring in Central America this is easily separated by its very short corolla tube. The collector remarks that it is a beautiful shrub, and the same may be said regarding the other Farameas which have blue blossoms.

Cephaelis aneurophylla, sp. nov.—Ramuli crassiusculi subteretes laeves glabri, internodiis 2-5.5 cm. longis; stipulae vaginam 3 mm. longam efformantes, parte superiore ut videtur delapsa; folia opposita brevissime petiolata, petiolo crasso 2-6 mm. longo glabro; lamina subcoriacea, utrinque glabra, anguste oblanceolato-oblonga vel anguste elliptico-oblonga, 8-14 cm. longa, 2.5-4.3 cm. lata, sensim acuminata, apice obtusiusculo, basin versus longe sensimque attenuata, basi ipsa truncata vel subcordata, auriculis rotundatis, conspicue marginata, supra viridis, densissime et minute puncticulata, nervis obsoletis, subtus albida, costa pallida crassa elevata, nervis obsoletis; inflorescentiae axillares 4-6.5 cm. longe pedunculatae, e capitulis 3 breviter pedunculatis compositae, basi bracteis 2 late ovatis acutis crassis 1.5-2 cm. longis glabris distinctis fulcratae; capitula dense multiflora c. 1 cm. lata, 3-4 mm. longe pedunculata, bracteis exterioribus rotundatis, 7-8 mm. longis et saepe latioribus, apice rotundatis, interioribus angustioribus, floribus sessilibus; calyx ad apicem fructus persistens, glaber, 5-partitus, laciniis anguste oblongis obtusis; fructus coccineus, ovalis vel subglobosus, 7-9 mm. longus, glaber, pyrenis dorso obtusissime tricostatis.—Venezuela: Between Maracay and Choroni, alt. 750 m., December 12, 1856, *A. Fendler 1979* (Gray Herb., type; duplicate in herb. Kew.).

Easily recognized by the very short petioles and truncate or subcordate leaf bases.

Cephaelis botryocephala, sp. nov.—Frutex 1.5-2.5 m. altus, ramulis crassiusculis obtuse tetragonis vel subteretibus glabris, internodiis brevibus vel elongatis; stipulae persistentes, erectae, 6-7 mm. longae, virides, glabrae, late ovatae, basi breviter connatae, apice breviter bifidae, lobis latis obtusis; folia petiolata opposita, petiolo 2-3.5 cm. longo gracili vel crassiusculo glabro; lamina crasse membranacea vel subcoriacea, elliptica, oblongo-elliptica vel ovalis,

7-17.5 cm. longa, 2.5-9.5 cm. lata, abrupte breviterque vel interdum longius acuminata, acumine triangulari obtuso, basi cuneatim acuta vel rarius obtusa vel subrotundata, utrinque glabra, supra viridis, nervis non elevatis, subtus pallidior, costa gracili elevata, nervis lateralibus utroque latere c. 11, ceteris intermediis multo gracilioribus parallelis interpositis, angulo lato adscendentibus, gracillimis, prominulis, arcuatis, in marginem desinentibus; inflorescentiae axillares, floribus sessilibus in capitulis dense congestis, capitulis in axillis fasciculatis vel breviter pedunculatis et in racemos breves dispositis, inflorescentiis usque ad 1 cm. longe pedunculatis, recurvis, capitulis ovalibus 1-1.4 cm. longis; bracteae purpureae, distinctae, late ovales vel subrotundatae, 5-8 mm. longae, rigidae, dense imbricatae, apice rotundatae, glabrae, ciliolatae; hypanthium turbinatum vix 1 mm. longum glabrum; calyx 1.5 mm. longus, lobis 5 rotundatis ciliolatis; corolla bracteis paullo longior, extus glabra, tubo 8 mm. longo superne paullo dilatato, lobis 5 triangulari-ovatis acutis 2 mm. longis suberectis.—Venezuela: El Portachuelo, between Maracay and Ocumare de la Costa, Miranda, January 29, 1922, *H. Pittier 10133* (U. S. Nat. Herb. No. 1,120,556, type; duplicate in herb. N. Y. Bot. Gard.). Same locality, January 20, 1924, *Pittier 11364* (W, Y). Between Agua Blanca and Cumbote, alt. 1,500 m., January 30, 1858, *Fendler 2554* (G).

Cephaelis botryocephala is much like *C. axillaris* Sw., but in that species the heads are simple and sessile in the leaf axils.

Cephaelis macrocarpa, sp. nov.—Ramuli graciles subteretes glabri, internodiis 1-4.5 cm. longis; stipulae persistentes, 5-6 mm. longae, alte connatae, apice bidentatae, dentibus subulatis c. 1 mm. longis erectis sinu latissimo rotundato sejunctis; folia opposita, petiolo gracili 0.6-3 cm. longo glabro; lamina subcoriacea, anguste oblonga vel lanceolato-oblonga, 9.5-17 cm. longa, 2.5-5 cm. lata, acuminata vel longiacuminata, acumine angusto acuto, basin versus longe angustata, basi ipsa acuta, supra viridis, glabra, costa nervisque non elevatis, subtus pallida, secus costam validam elevatam ciliata, aliter glabra, nervis lateralibus utroque latere c. 20, aliis vix tenuioribus parallelis interpositis, gracillimis, prominulis, angulo fere recto divergentibus, nervulis inconspicuis laxe reticulatis; inflorescentiae terminales vel pseudo-axillares, 3.5-6 cm. longe pedunculatae, capitatae, simplices, pedunculis crassis erectis rectis vel leviter curvis, capitulis dense paucifloris, floribus sessilibus; bracteae 2 exteriores late ovatae obtusae 8 mm. longae glabrae scaberulociliatae, interioribus paullo brevioribus ovalibus, ovatis vel lanceolatis, obtusis vel acutis; calyx ad apicem fructus persistens, tubulosocampanulatus, 4-5 mm. longus, inaequaliter 5-dentatus; fructus 12 mm. longus subglobosus, basi et apice rotundatus, glaber, obtuse costatus; semina semiglobosa 1 cm. longa, dorso obtuse costata, facie interiore plana.—Venezuela: Near Colonia Tovar, alt. 1,500 m., 1856-57, *A. Fendler 1990* (Gray Herb., type; duplicate in herb. Kew.).

Palicourea Fendleri, sp. nov.—Frutex, ramulis gracilibus teretibus laevibus glabris, in sicco olivaceis, internodiis brevibus vel elongatis; stipulae 3-4 mm. longae breviter connatae profunde bifidae, lobis ovatis apice obtusis vel rotundatis glabris; folia opposita, petiolo 0.7-2.5 cm. longo supra bisulcato glabro; lamina anguste lanceolata vel ovato-oblonga, 10-19 cm. longa, 3-7.5 cm. lata, longe sensimque acuminata, basi obtusa vel acuta, crasse papyracea, glabra, supra in sicco luteo-viridis vel laete viridis, costa nervisque prominentibus, subtus pallidior vel fere concolor, costa gracili elevata, nervis lateralibus utroque latere 9-13, angulo lato adscendentibus, gracilibus, arcuatis, remote a margine arcuato-conjunctis, nervulis inconspicuis; inflorescentiae cymoso-paniculatae vel subcorymbosae, 4.5-9 cm. longe pedunculatae, laxe pauciflorae, 3-5.5 cm. longae, 3.5-7 cm. latae, ramulis divaricatis vel adscendentibus, paucis, minute puberulis; bracteae minutissimae; flores pedicellati, pedicellis 2-8 mm. longis; hypanthium late turbinatum minutissime puberulum vel fere glabrum; calyx 0.5 mm. longus fere glaber, lobis minutis late rotundatis; corolla solum in alabastro visa, alabastris ubique dense minuteque luteo-tomentosis; fructus subglobosus 6-7 mm. longus glaber sulcatus, costis obtusis.—Venezuela: Between Maracay and Choroni, alt. 1,650 m., January 29, 1857, *A. Fendler 1983* (Gray Herb., type; duplicate in herb. Kew.). Puerto Cruz, Federal District, 900 m., *Whitford 59* (G). Caracas, *Birschel* (G, K).

From *P. guianensis* Aubl., to which it is closely related, this differs in the narrow leaves and small stipules. It is nearly allied, also, with *P. semirasa* Standl., of Colombia, but in that species the corolla is merely papillose about the apex.

Palicourea Jahnii, sp. nov.—Rami vetustiores nigrescentes rimosi, ramulis teretibus glabris dense foliatis; stipulae in vaginam incrassatam 1-2 mm. longam truncatam connatae, vagina in lobos 4 remotos triangulares 1-1.5 mm. longos erectos rigidos desinente; folia opposita glabra, petiolo 0.5-2 cm. longo supra late sulcato; lamina coriacea, elliptica, 4-12 cm. longa, 2-6 cm. lata, apice obtusa, acutiuscula vel fere rotundata, rarius breviter acuminata, basi acuta vel obtusa, luteo-viridis, costa supra prominente, nervis subimpressis, costa subtus elevata crassiuscula, nervis lateralibus utroque latere c. 9, angulo lato adscendentibus, gracilibus, arcuatis, prope marginem arcuato-conjunctis, margine anguste revoluto, nervulis obscuris; inflorescentia 0.8-1.8 cm. longe pedunculata cymoso-corymbosa dense multiflora, 3-6 cm. longa, 3.5-8 cm. lata, ramulis gracilibus adscendentibus vel suberectis minutissime puberulis; bracteae subulatae 1-3 mm. longae persistentes; flores pedicellati, pedicellis 1-6 mm. longis minute puberulis; hypanthium vix 1 mm. longum late turbinatum minutissime papilloso-puberulum; calyx 0.6 mm. longus 5-dentatus, dentibus minutis late triangularibus acutis; corolla 6-7 mm. longa minute papillosa, tubo superne ampliato fauce fere 2 mm. lato, basi paullo ampliato, lobis ovalibus obtusis

1 mm. longis; stylus breviter exsertus; fructus didymo-globosus 4 mm. longus, 5 mm. latus, glaber, profunde sulcatus, costis obtusis. —Venezuela: Páramo Quirorá, State of Mérida, alt. 3,200 m., October 8, 1921, *Alfredo Jahn 704* (U. S. Nat. Herb. No. 1,120,196, type; duplicates in Gray Herb. and herb. N. Y. Bot. Gard.). Páramo del Morro, Mérida, 2,700 m., *Jahn 1064* (W). Páramo del Molino, 2,600 m., *Jahn 939* (W), *952* (W). Laguna Grande, Páramo Mucuchies, Mérida, 3,300 m., *Bellard 38* (W).

This shrub of the high paramos is related to *P. petiolaris* HBK. but that species differs in the larger, usually acute leaves on longer petioles, and in the thyrsoid inflorescence.

Palicourea Pittieri, sp. nov.—Frutex glaber 1.5-3-metralis, ramulis gracilibus teretibus viridibus laevibus vel striatis glabris, internodiis brevibus vel elongatis; stipulae in vaginam glabram truncatam 1-2 mm. longam connatae, vagina in lobos 4 triangulari-oblongos 1-2 mm. longos virides acutos erectos desinente; folia opposita, petiolo 2-4 mm. longo glabro; lamina anguste oblongo-lanceolata vel lanceolato-oblonga, 4.5-13 cm. longa, 1-4 cm. lata, apice longe sensimque acuminata, rarius acuta, basi acuta vel obtusa, anguste marginata, subcoriacea vel crasse papyracea, sublucida, glabra, supra viridis, costa nervisque prominentibus, rhaphidibus minutis pallidis conspersa, subtus pallidior, costa gracili elevata, nervis lateralibus utroque latere c. 13, angulo lato adscendentibus, gracilibus, prominulis, arcuatis, marginem attingentibus, nervulis obsoletis; inflorescentia 1-3 cm. longe pedunculata cymoso-corymbosa, densa, pauci- vel multiflora, 1.5-4 cm. longa, 1.5-6 cm. lata, ramulis gracilibus adscendentibus minute puberulis; bracteae subulatae 1-2 mm. longae; flores conferti subsessiles vel pedicellis usque ad 6 mm. longis stipati; hypanthium turbinatum glabratum 1 mm. longum; calyx 0.5 mm. longus, dentibus minutis inaequalibus obtusis vel acutis; corolla caerulea vel alba, extus glabra, infundibuliformis, 11-17 mm. longa, tubo superne paullo ampliato fauce 3 mm. lato, lobis triangulari-oblongis acutiusculis 3-3.5 mm. longis patentibus; antherae semiexsertae lineares 3 mm. longae; stylus inclusus; fructus ovoideo-globosus 5-6 mm. longus glaber niger vix sulcatus.—Venezuela: Silla de Caracas, Federal District, alt. 2,000-2,640 m., December 26-29, 1918, *H. Pittier 8346a* (U. S. Nat. Herb. No. 988,450, type). Colonia Tovar, 1,950 m., *Fendler 559* (G, M, K, Y); alt. 2,000 m., *Jahn 450* (W), *1203* (W). Upper belt of Pico de Naiguatá, Miranda, 2,400-2,765 m., *Pittier 6242* (W, Y). On high river margin, Lora River, Zulia, *Pittier 10948* (W, Y).

This is an isolated species, not very closely related to any other known from Venezuela or Colombia.

Psychotria Bolivariana, sp. nov.—Frutex 2-metralis, ramulis gracilibus teretibus dense breviterque lutescenti-pilosis, internodiis elongatis; stipulae persistentes breviter connatae fere ad basin

bifidae, lobis lanceolatis vel lineari-lanceolatis subulato-attenuatis erectis dense pilosulis; folia opposita, petiolo gracili 7-18 mm. longo dense hispidulo; lamina membranacea, lanceolato-oblonga, 7-13 cm. longa, 2.5-4 cm. lata, longe angusteque acuminata, acumine acuto, basi acuta vel obtusa, supra viridis, asperula, pilis lutescentibus hispidula, nervis non elevatis, subtus pallidior, undique hispidula, costa gracili elevata, nervis lateralibus utroque latere c. 8, gracilibus, prominentibus, angulo lato vel acuto adscendentibus, arcuatis, prope marginem conjunctis, nervulis prominentibus laxe reticulatis; inflorescentiae terminales et ex axillis supremis nascentes, 1-2 cm. longe pedunculatae, 1.5-4 cm. longae et latae, dense multiflorae, cymoso-paniculatae sed vulgo dense congestae et interdum subcapitatae, in fructu laxiores, floribus sessilibus vel breviter pedicellatis; bracteae numerosae conspicuae lineari-attenuatae, plerumque 8-12 mm. longae, dense luteo-pilosulae, persistentes; hypanthium turbinatum dense pilosulum; calyx 4 mm. longus profunde 5-fidus, laciniis lanceolato-linearibus longiattenuatis dense pilosulis; corolla alba infundibuliformis 1 cm. longa, extus longiuscule pilosa, tubo superne dilatato fauce 2.5 mm. lato, lobis anguste triangularibus 2.5 mm. longis subacutis; stylus breviter exsertus; fructus niger ellipsoideus 5 mm. longus graciliter costatus dense pilosus.—Venezuela: Galipán, near the crest of Cerro de Avila, State of Miranda, alt. 1,800-2,400 m., May 20, 1913, *H. Pittier 6211* (Herb. Field Mus. No. 531,381, type; duplicates in U. S. Nat. Herb. and herb. N. Y. Bot. Gard.). Colonia Tovar, 1,950 m., *Fendler 550* (G, K, M). Cerro de Galipán, 1,350-1,800 m., *Eggers 13562* (F, W). Mountains near Galipán, *E. Pittier 130* (W, G, Y). Upper Catuche Wood near Caracas, 1,400 m., *Pittier 9582* (W). Caracas, *Birschel* (K). Colonia Tovar, *Moritz 841* (K).—Colombia: Mesa de los Santos, Santander, 1,500 m., *Killip & Smith 15365* (W, Y). Ocaña, 2,400 m., *Schlim 706* (K).

An easily recognized species because of the copious yellowish pubescence and abundant, conspicuous, narrow bracts.

Palicourea Purpusii, sp. nov.—Frutex omnino glaber, ramulis validis subteretibus, internodiis elongatis; stipulae in vaginam truncatam 3-4 mm. longam adpressam connatae, vagina in lobos 4 triangulares 2.5-3 mm. longos acutos vel obtusos erectos persistentes desinente; folia opposita, longe petiolata, petiolo gracili 2.5-5 cm. longo; lamina crasse membranacea, oblongo-lanceolata vel ovato-lanceolata, 11-17 cm. longa, 3.5-5 cm. lata, longe sensimque acuminata, acumine angusto longe attenuato, basi acuta et interdum abrupte contracta et decurrens, in sicco nigrescens, nervis supra non elevatis, subtus vix pallidior, costa crassiuscula elevata, nervis lateralibus utroque latere 13-17, angulo lato adscendentibus, gracilibus, prominulis, arcuatis, prope marginem conjunctis; inflorescentia terminalis 10-14 cm. longe pedunculata, cymoso-corymbosa, c. 7.5 cm. longa et 9 cm. lata, dense multiflora, basi trichotoma vel radiatim ramosa, ramis adscendentibus, supra

interdum fastigiato-ramosa, bracteis oblongis acutiusculis c. 1 mm. longis persistentibus, pedicellis gracilibus plerumque erectis 10-13 mm. longis; fructus ovalis c. 6 mm. longus et 4.5 mm. latus obtuse costatus, basi et apice rotundatus, loculo altero saepe aborto.—Mexico: Shady forest, Zacuapam, Veracruz, May, 1928, *C. A. Purpus 10110* (Herb. Field Mus. No. 602,907, type). Moist shady places, Zacuapam, April, 1927, *Purpus 10101*.

From Mexico there are known only two other species of this genus, *Palicourea Galeottiana* Mart. and *P. nigrescens* Mart. & Gal. The description of the latter species suggests its relationship with the present plant, but the stipule lobes of *P. nigrescens* are said to be linear-lanceolate, and the inflorescence subsessile and much shorter than the leaves.

Psychotria Macbridei, sp. nov.—Frutex 1.5-2.5 m. altus, ramulis crassis subteretibus, novellis ferrugineis, vetustioribus cortice griseo vel brunneo rimoso obtectis, internodiis plerumque brevissimis; stipulae caducae ovato-triangulares 8-10 mm. longae vel longiores, subulato-acuminatae, tenues, ferrugineae, glabrae; folia opposita, petiolo crasso 8-12 mm. longo glabro; lamina crasse coriacea, obovato-oblonga vel elliptico-oblonga, 7.5-11 cm. longa, 2.5-4 cm. lata, longe et subabrupte acuminata, acumine acuto, basin versus longe angustata et decurrens, supra in sicco fusca, glabra, costa prominente, nervis obscuris, subtus pallidior, brunnescens, pilis gracilibus albidis patentibus undique sparse pilosa vel denique glabrata, costa gracili prominente, nervis lateralibus utroque latere c. 7, angulo acutissimo adscendentibus, gracilibus, leviter curvis, marginem attingentibus, nervulis obsoletis; inflorescentia terminalis vel pseudoaxillaris sessilis, e basi 2-4-ramosa, 2.5-4 cm. longa, ramis primariis simplicibus sparse puberulis, floribus fragrantibus sessilibus glomerulos paucos densos multifloros sessiles spicatim dispositos efformantibus; bracteae triangulares acutae c. 1 mm. longae; calyx 1 mm. longus 5-dentatus puberulus vel fere glaber, dentibus late triangularibus obtusis vel acutis; corolla extus viridescens glabra infundibuliformis 5 mm. longa, lobis oblongis tubum aequantibus obtusis, intus densissime albo-barbatis; antherae oblongo-lineares subexsertae.—Peru: La Merced, alt. 1,200 m., August 27-September 1, 1923, *J. Francis Macbride 5785* (Herb. Field Mus. No. 536,815, type; duplicate in U. S. Nat. Herb.).

This appears to be a very well-marked species, characterized by the thick pubescent leaves and spicate-paniculate inflorescence. It is related, probably, to *P. viridis* R. & P.

Psychotria araguana, sp. nov.—Frutex metralis, ramulis gracilibus teretibus viridibus glabris, internodiis elongatis; stipulae persistentes in vaginam viridem 1.5-2 mm. longam truncatam glabram connatae, vagina in lacinias 4 remotas triangulares acutas 1 mm. longas desinente; folia petiolata opposita, petiolo gracili 7-18 mm.

longo minutissime puberulo vel glabrato; lamina firme membranacea, ovato-oblonga vel lanceolato-oblonga, 10-15 cm. longa, 3-6.5 cm. lata, longe acuminata, acumine angusto attenuato apice obtuso, basi acuta vel obtusa et abrupte contracta, utrinque glabra, supra laete viridis, nervis non elevatis, subtus pallidior, costa gracili elevata, nervis lateralibus utroque latere c. 9, angulo acuto adscendentibus, gracilibus, subarcuatis, prope marginem conjunctis et interdum nervum collectivum distinctum efformantibus, nervulis prominulis laxe reticulatis; inflorescentia terminalis 4.5-8 cm. longe pedunculata, laxe cymoso-paniculata, multiflora, c. 7 cm. longa et 8 cm. lata, pedunculo gracili erecto glabro, ramis alternis glabris gracilibus late divaricatis vel saepius subrecurvis, dichotomis, remotifloris, floribus secus ramulos sessilibus solitariis vel fasciculatis, bracteis minutis et inconspicuis; hypanthium obovoideum glabrum 0.8 mm. longum; calyx 0.5 mm. longus breviter et obscure dentatus glaber; corolla roseo-alba extus glabra in alabastro apice rotundata, 5-6 mm. longa, tubo superne dilatato in fauce non barbato, lobis 5 oblongis obtusis adscendentibus intus minute papillosis; antherae subexsertae lineares 2 mm. longae.—Venezuela: El Portachuelo, on road from Maracay to Ocumare, Aragua, in humid forest, alt. 1,100 m., May 8, 1925, *H. Pittier 11828* (U. S. Nat. Herb. No. 1,232,708, type). San Juan de los Morros, Aragua, January 29, 1922, *Pittier 10126* (W).

In general appearance similar to *P. patens* Sw., but differing substantially in the form of the stipules as well as in the form and texture of the leaves.

Psychotria Eggersii, sp. nov.—Frutex 1-1.5 m. altus, ramulis gracilibus teretibus, vetustioribus ochraceis laevibus vel rimosis, novellis dense et minute scaberulo-puberulis, internodiis brevibus vel elongatis; stipulae persistentes erectae vaginantes truncatae 1-2 mm. longae, dense scaberulo-puberulae, apice mucronatae; folia petiolata opposita, petiolo gracili 5-13 mm. longo dense puberulo; lamina firme membranacea, lanceolato-oblonga vel elliptico-oblonga, rarius elliptica, 4-11 cm. longa, 1-3.5 cm. lata, longe acuminata, acumine angusto longe attenuato interdum falcato apice obtuso vel subacuto, basin versus longe attenuata vel interdum abrupte angustata et decurrens, supra viridis, glabra, nervis non elevatis, subtus pallida, ad nervos dense minuteque puberula, costa gracili elevata, nervis lateralibus utroque latere c. 11, gracillimis, prominentibus, in sicco saepe rubicundis, angulo acuto adscendentibus, juxta marginem conjunctis, nervulis prominulis laxe reticulatis; inflorescentiae terminales 5-17 mm. longe pedunculatae, thyrsoideo-paniculatae, dense vel laxe multiflorae, 2-5 cm. longae, 1-3 cm. latae, ramis basalibus oppositis, omnibus brevibus, divaricatis vel abrupte subreflexis, dense puberulis, floribus ad apices ramulorum congestis sessilibus vel brevissime pedicellatis, bracteis inconspicuis linearibus vel subulatis 1-1.5 mm. longis puberulis; hypanthium 0.6 mm. longum puberulum; calyx 0.5 mm. longus minute 4-dentatus, dentibus obtusis

vel acutiusculis; corolla alba in alabastro apice 4-corniculata, 5 mm. longa, extus sparse puberula, tubo gracili superne vix ampliato, ore non barbato, lobis 4 anguste oblongis subacutis tubo fere duplo brevioribus; antherae lineares exsertae 1-1.5 mm. longae; fructus subglobosus 3.5-4.5 mm. latus glaber, pyrenis dorso obtuse costatis.—Venezuela: High ridge north of Caracas, alt. 1,800 m., June 27, 1891, *Eggers 13187* (Herb. Field Mus. No. 580,339, type; duplicate in W). El Valle, June 25, 1891, *Eggers 13187* (W). Caracas, *Warming 164* (W). Cerros de Avila, Federal District, 1,600 m., *E. Pittier 27* (W, Y). Upper Catuche Wood, near Caracas, 1,400 m., *Pittier 9586* (W, Y), *7158a* (W). Colonia Tovar, 1,950 m., *Fendler 561* (G, K, M, Y), *561β* (G), *1984* (G, K).

Clearly a relative of the Colombian *P. amita* Standl., but the latter is distinguished by the form of the stipules, by the leaf pubescence, and by the smaller corolla.

Psychotria guaremalensis, sp. nov.—Frutex, ramulis gracilibus teretibus viridibus glabris, internodiis 6-8 cm. longis; stipulae persistentes in vaginam glabram truncatam 2.5-4 mm. longam connatae, vagina in lacinias 4 lineari-subulatas 4-7 mm. longas virides erectas attenuatas desinente; folia breviter petiolata opposita, petiolo gracili 10-13 mm. longo supra sulcato glabro; lamina papyracea, oblonga vel oblongo-elliptica, 15-19 cm. longa, 5-8 cm. lata, longe acuminata, acumine angusto attenuato obtusiusculo, basi obtusa vel acuta, interdum abrupte contracta, glabra, pallido-marginata, supra viridis, costa et nervis prominentibus, subtus vix pallidior, costa gracili elevata, nervis lateralibus utroque latere c. 10, gracilibus, angulo lato adscendentibus, prominentibus, in marginem desinentibus, nervulis prominulis laxe reticulatis; inflorescentia terminalis 5-6 cm. longe pedunculata, laxe lateque cymoso-paniculata, 7-9 cm. longa, 8-11 cm. lata, multiflora, pedunculo gracili rigido erecto, ramis oppositis vel alternis gracilibus glabris vel sparse et minutissime puberulis, repetite dichotomis, ramulis remotifloris patentibus vel saepe recurvis, floribus sessilibus secundis, bracteis minutis inconspicuis; hypanthium glabrum 0.5 mm. longum; calyx 0.5 mm. longus glaber remote 4-denticulatus; corolla purpurascens extus sparse minuteque pilosula, 5 mm. longa, in alabastro apice 4-corniculata, tubo cylindraceo fauce non barbato, lobis 4 patentibus vel reflexis obtusis vel acutiusculis; antherae inclusae; stylus breviter exsertus.—Venezuela: Outskirts of forests along brook, Upper Guaremales, road from Puerto Cabello to San Felipe, State of Carabobo, July 28, 1920, *H. Pittier 8989* (U. S. Nat. Herb. No. 1,067,206, type; duplicate in Gray Herb.).

A close ally of *P. patens* Sw., but differing from that species in the broader inflorescence with much longer and more divided branches, and in the pubescent appendaged corolla.

Psychotria Lindenii, sp. nov.—Frutex, ramulis gracillimis subteretibus vel obtuse angulatis viridibus glabris, internodiis elongatis; stipulae persistentes in vaginam glabram truncatam 1.5-2 mm. longam connatae, vagina in lacinias 4 erectas linearisubulatas 4-6 mm. longas attenuatas virides glabras desinente; folia fere sessilia opposita, petiolo 1-3 mm. longo glabro; lamina crasse papyracea, oblonga, ovato-oblonga vel oblanceolato-oblonga, 7-12 cm. longa, 2-4.5 cm. lata, longe acuminata, acumine angusto attenuato obtuso vel acuto, basi obtusa vel subrotundata, rarius basin versus angustata, glabra vel subtus ad nervos sparse et minutissime puberula, supra viridis, sublucida, costa elevata, nervis non elevatis, subtus paullo pallidior, interdum rubescens, costa gracili elevata, nervis lateralibus utroque latere c. 8, gracillimis, prominentibus, arcuatis, angulo lato adscendentibus, in marginem desinentibus, nervulis prominulis arcte reticulatis; inflorescentia terminalis 2-2.5 cm. longe pedunculata, cymosocapitata, dense multiflora, c. 1.5 cm. longa et 2.5 cm. lata, pedunculo gracili erecto vel subrecurvo minute puberulo vel fere glabro; bracteae lineares vel lanceolato-lineares 10-15 mm. longae, longe attenuatae, glabrae, obscure pinnato-nerviae, intimis paullo brevioribus; flores sessiles; hypanthium glabrum 0.8 mm. longum cylindraceum; calyx glaber 0.6-0.8 mm. longus 4-dentatus, dentibus triangularibus acutis; corolla extus glabra, tubo cylindrico 5 mm. longo fauce non barbato, lobis 4 reflexis oblongo-triangularibus 2 mm. longis intus glabris; antherae longe exsertae lineares 1.5 mm. longae.—Venezuela: "New Granada" (but probably from Venezuela), in 1842-43, *I. Linden 1419* (Herb. Kew., type). Río Canaguá, May 29, 1926, *Christ 22* (W).

A plant similar in most respects to *P. flavicans* Muell. Arg., of Brazil, but differing from that species in the nearly sessile leaves with broader bases, and in the narrower, more numerous bracts.

Psychotria racemifera, sp. nov.—Frutex decumbens 30-40 cm. tantum altus, basi radicans, pauciramosus, ramis teretibus gracilibus viridibus glabris, internodiis 2.5-6 cm. longis; stipulae persistentes in vaginam viridem truncatam glabram 2 mm. longam connatae, vagina in lacinias 4 erectas glabras subulatas 2-3 mm. longas attenuatas desinente; folia petiolata opposita, petiolo gracili 6-8 mm. longo supra sulcato glabro; lamina firme membranacea, elliptico-oblonga vel anguste elliptica, 5.5-10.5 cm. longa, 2-4 cm. lata, sensim vel subabrupte longiacuminata, acumine angusto attenuato obtusiusculo, basi acuta, conspicue marginata, margine pallido cartilagineo, glabra, supra laete viridis, costa pallida elevata, nervis prominulis, subtus pallida, costa gracili elevata, nervis lateralibus utroque latere c. 9, gracilibus, prominulis, arcuatis, angulo lato adscendentibus, in marginem desinentibus, nervulis obscuris laxe reticulatis; inflorescentia terminalis 2-3 cm. longe pedunculata, floribus sessilibus capitato-congestis, capitulis racemosis, racemo 6.5-7.5 cm. longo, rhachi obtuse angulata minute

puberula, capitulorum pedunculis 2-5 mm. longis crassis divaricatis, capitulis dense paucifloris bracteatis, bracteis exterioribus oblongis vel linearibus 2-5 mm. longis viridibus glabris, ceteris late ovatis obtusis c. 2 mm. longis obtusis viridibus ciliolatis adpressis; hypanthium glabrum, calyce 0.5 mm. longo glabro breviter dentato; corolla alba extus glabra infundibuliformis, in alabastro obtusa, 2.5-3 mm. longa, tubo obconico in fauce non barbato, lobis 4 ovatis obtusis tubo paullo brevioribus patentibus; antherae inclusae; stylus longe exsertus.—Venezuela: Along Río Lora, above Camp 2 of Perijá Exploration Company, Zulia, December 14, 1922, *H. Pittier 10958* (U. S. Nat. Herb. No. 1,187,493, type; duplicate in herb. N. Y. Bot. Gard.).

The shrub is noteworthy for its small size and for the conspicuously pale-margined leaves. The form of the inflorescence, consisting of an elongate raceme of small few-flowered green-bracted heads, is distinctive.

Rudgea apodantha, sp. nov.—Ramuli crassi subteretes ochracei glabri, internodiis brevibus; stipulae persistentes rotundato-ovatae 3-4 mm. longae glabrae, apice rotundatae et aculeolis paucis erectis rigidis glabris 5-6 mm. longis onustae; folia breviter petiolata opposita, petiolo 3-13 mm. longo crasso glabro supra sulcato; lamina crasse membranacea, obovato-oblonga, 11-20 cm. longa, 4.5-8 cm. lata, apice acuta vel plerumque obtusa et abrupte breviterque acuminata, acumine triangulari subobtuso, basin versus sensim angustata, basi ipsa obtusa, supra viridis, glabra, costa impressa, nervis manifestis sed vix elevatis, subtus pallida, minutissime scaberula vel glabrata, costa gracili elevata, nervis lateralibus utroque latere c. 12, gracilibus, prominentibus, angulo lato adscendentibus, arcuatis, remote a margine conjunctis, nervulis prominulis laxe reticulatis; inflorescentia terminalis sessilis capitata pauciflora; drupa nigra lucida carnosa, obovoideo-globosa 12 mm. longa glabra apice depressa.—Venezuela: Near Colonia Tovar, alt. 1,200 m., 1856-57, *A. Fendler 1993* (Gray Herb., type; duplicate in herb. Kew.).

Well marked by the sessile headlike inflorescence.

Rudgea maypurensis, sp. nov.—Frutex 1.8-2.5 m. altus ramosus, ramulis crassis ochraceis vel griseis glabris subteretibus, internodiis 5-7 mm. longis; stipulae subpersistentes 3-4 mm. longae glabrae nitidae, apice subtruncatae et aculeolis paucis rigidis erectis 3-4 mm. longis onustae; folia subsessilia opposita, petiolo crasso vix 2 mm. longo; lamina rigide coriacea, elliptica vel elliptico-oblonga, 4.5-6.5 cm. longa, 1.5-3.5 cm. lata, obtusa vel acutiuscula, basi plerumque emarginata, supra viridis, lucidissima, costa impressa, nervis prominulis, utrinque glabra, subtus pallida, lutescens, costa gracili elevata, nervis lateralibus utroque latere c. 7, angulo acuto adscendentibus, gracillimis, prominulis,

subarcuatis, prope marginem conjunctis, nervulis obsoletis, margine valde revoluto; inflorescentia terminalis 3-3.5 cm. longe pedunculata subcapitato-racemosa, 3-4 cm. longa et 3.5 cm. lata, ramis basalibus oppositis vel ternatis divaricatis validis angulatis glabris, bracteis lanceolatis vel oblongo-lanceolatis 3-6 mm. longis viridibus ciliatis, floribus ad apices ramorum dense capitato-congestis sessilibus; calyx 5-fidus, laciniis oblongis 1.5-2 mm. longis obtusis vel acutis ciliatis; drupa rubra subglobosa succulenta 6 mm. longa, apice depressa, glabra.—Venezuela: Maypures, in montibus graniticis frequens, June, 1854, *R. Spruce 3615* (Herb. Kew., type).

The very thick, conspicuously shining, and strongly revolute leaves enable one to recognize this species easily.

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